11/23/81 S6140-2

ANNUAL PLANNING REPORT

Fiscal Year 1982

NORTH DAKOTA

LABOR MARKET INFORMATION

Prepared By

Research & Statistics Section

JOB SERVICE
North Dakota

ANNUAL PLANNING REPORT
FISCAL YEAR 1982

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SEPTEMBER 1981

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I. INTRODUCTION

The purpose of this annual planning document is to provide a current knowledge base for those who design and implement manpower programs. Manpower programs are defined by their purpose which is to gain rational control over relationships in the labor market. Government, from those agencies operating under the Comprehensive Employment and Training Act (CETA) to the military; and private industry, from the largest international conglomerates to local hospital personnel administrators, have programs of at least some scope for obtaining manpower and integrating manpower into the process of production. The labor market, in turn, is an arena of social (and sometimes legally sanctioned contracting as in the case of air traffic controllers) contracting between employer and employee concerning the exchange of labor for wages and benefits. The labor market, because it is the result of human efforts, is not a purely economic arena of exchange. It thrives for example, on information; objects and talents are valued for their noneconomic worth; and there are social and political structures continually striving to control the supply, demand, and character of labor in the market. The labor market is a dynamic arena of organized human exchange. And how we interpret and behave in the labor market depends, in part, upon how we and others view its functioning and the constraints limiting its activities.

This publication presents a substantial amount of tabular data concerning North Dakota's population and economy as part of an interpretive process, and suggests perspectives on the data in five chapters and five appendices. Chapter III serves to introduce the reader to the geography, population, and political boundaries of the state. Topographic and meteorological data, and data sources used to update information on the state's population between the census years, are presented as Appendix I. Chapter III and Appendix I, then, outline some of the noneconomic limitations to employment growth in terms of the state's physical environment and population. Chapter IV focuses on describing a subset of the state's population--its labor force. Chapter V outlines the economic context within which job opportunities have traditionally arisen, and presents economic activity, job holding, and earnings as related but distinct phenomenon. Chapter V also presents a short-term forecast of employment growth by industry with complementary Appendix II providing detailed data on job-related earnings and personal income. In the following chapter, job forecasts are translated into occupational forecasts. Chapter VI also contains a discussion of the techniques employed in creating occupational forecasts, providing a basis for the interpretation of the statistics in Appendix III. Chapter VII focuses on the unemployed and describes the other major population segments, especially those in poverty, who are also served by Job Service. This chapter also suggests a perspective for the interpretation of joblessness and income data, and provides a platform for the interpretation of labor force and statistical data concerning the economically disadvantaged in Appendix I. Finally, Appendix V provides tabular data on the state's SMSAs.

Tabular data, published under the label of Labor Market Information, represents a human method of accounting for human phenomenon. As such, the tabular data presented here are not so much "factual" material as they are "a snapshot" view of a world in motion as seen primarily from the classical economics theoretical tradition.

Secondly, little economic or labor market data results from research conducted in a conventional fashion: a stage of problem identification, data collection, and interpretation and presentation. Published statistical data is often a by-product of program management data that is collected in the process of meeting legislatively mandated regulation or planning. Employee wage record data, for example, are collected and maintained for the purpose of administering state level job insurance programs. In addition, these wage records become an integral part in the development of measures such as personal income. The task of compiling data for a national economic indicator, such as personal income, is a task involving the assembly of data from a variety of sources all of which were initially designed in ways entirely independent of the development of national income indicators. The meaning of economic and labor market data, then, is not only a problem of viewing the world from only one dominant theoretical perspective; it is also a problem of merging accounting techniques designed for narrow program management into economic indicators that have general application and are comparatively easy to interpret.

Forced reliance on a multitude of data sources in creating economic and labor market indicators leads to another problem concerning the currency of data. Reliance on several sources and types of data in order to construct one economic index often means that currently published data are subject to revision as delinquent reports become available, as errors are discovered, and as marginal data are verified.

In summary, the available, standardized statistical data about the economy and the labor market were evolved within a particular historical context of questions, resources, and technological limitations. The system is designed to answer questions that the present historical period may not be forcing us to ask. Perhaps the best short-term method of adding flexibility to the data, so that it might be used to address emerging labor market questions, is to be as straightforward as space permits in defining the data, and as geographically and time sequence detailed, as appendix space permits.

II. OVERVIEW

There is a tendency to view the state's economy not in terms of calendar or fiscal years, but rather in terms of economic periods such as crop years or construction seasons. These economic periods are marked by turning points signifying a change in the direction of economic trends. In this report, we have adopted the perspective that the winter of 1979/80 represents the closing of an economic period that saw employment and the state's housing stock grow much faster than its population. In all but one year between 1972 and 1979, the number of nonfarm jobs grew at an annual rate of 4.4 to 5.8 percent. However, from 1979 to 1980, nonfarm jobs grew at a rate of less than 1 percent, and we expect a slow rate of job growth to continue at least until agricultural production expenditure and farm income monies relating to the 1982 crop begin working their way through the economy. Most projections also suggest that interest rates are unlikely to drop and remain much below 15 percent until the fall of 1982. It is likely that the period from the first quarter of 1980 to the third quarter of 1982 will be thought of as a period of very modest employment growth in comparison to the preceding eight years.

Coincidental with the 1979/80 economic turning point was the Census Bureau's canvassing of the state's households as it conducted the decennial census of population and housing. Population is rarely treated as a verb, and yet, there are fewer phenomenon on the Great Plains than population that should be treated as a fluid and changing quantity. Preliminary statistics from the 1980 Census show that despite the fact that the state's population as a whole grew substantially, roughly two-thirds of the counties lost population, and more than four-fifths of the counties experienced net out-migration. The available estimates also suggest that at some point during the decade of the '70s, the population of the state crossed an invisible demographic line of substantial consequence for the economy and labor market. Due to the age structure of the state, and the slowing of the birthrate, a greater proportion of the population were in the age group (ages 16-64) most likely to look for work, establish households, and become full-fledged consumers than at any point in time since the Census Bureau began its program in the state.

The shift in the age distribution towards middle age would carry with it far less significance were it not for the fact that more and more of these people (in particular women and youth) were also entering the labor market and finding jobs. These jobs were being found, increasingly, in more densely populated counties of the state. Moreover, as the industrial focus of the state's economy began to shift away from a sole dependence on agriculture and towards housing, extractive industries, and human services, an increasing number of new jobs were being found in services, during the latter years of the decade in construction, and more recently in mining. At the same time, the number of people employed directly in agriculture declined and such major industrial groups as TCPU (transportation, communication, and public utilities) and FIRE (finance, insurance, and real estate), or facilitating and supportive industries, came to dominate a larger portion of the economy.

What this rapid employment growth during the late '70s meant was a strong, real income growth in nonfarm personal income while farm personal income vacillated between an average of $25,392 per farm in 1974, to $6,800 in 1977. It is not too surprising then, that the Census of Agriculture for 1974 and 1978 should reveal not only a decline in the number of medium-size farms, but also a substantial growth in off-farm employment among farm operators. Despite the fact that the roughly 40,000 farms in the state represent our key export industry--many who are farmers and their families are coming to rely upon off-farm employment in nonfarm wage and salary industries to stabilize their incomes, raise their standard of living, or to capitalize a first farming venture.

Because a larger proportion of North Dakota's labor force (than nationally) is self-employed, reduced earnings, rather than high unemployment rates (+7 percent), may be the key response of the state's economy and labor market to recession. The effects of the drought/recession of 1979/80 are apparent in employee earnings records and crop yield reports, but they are less apparent in unemployment statistics. Even so, per capita personal income in the state generally falls several percentage points below what it does in the nation as a whole. And the aftermath of reduced small business sales, hours reductions, or a declining agricultural market, is likely to be the forcing of more people nearer to the officially defined poverty level even though they may still hold a job or own a business. For a variety of reasons, including the proportion of the population that is self-employed, the prevalence of joblessness by itself may tell us little about the economic well-being of the households in the state.

The temporarily large number of unemployed, restricted employment and earning opportunities, and the underutilization of employed individuals masks a labor force problem likely to become more prevalent and generalized as the decade progresses. It appears likely that certain sources, and therefore certain occupational classes of labor supply, are becoming increasingly scarce. Population projections indicate that during this decade, a declining number of youth will be available to participate in the labor force, and adult female participation in the labor force may be very near its peak.

Expanded labor force participation among youth and females during the '70s provided the manpower for a growing economy. As the state's economy responds during the early '80s to its unique position relative to energy and the world demand for food, it may find that shortages in some skill areas hamper development but still leaves those without skills underemployed or without a job entirely. Most industrial growth during the '80s is predicated on a combination of increased productivity, and on the expansion of the number of production worker, service, and clerical occupations. With the potential population of labor force entrants dwindling, misinformation and miscuing in the labor market could lead to even more serious labor shortages than are now being demonstrated in selected occupations such as nursing, programming, and engineering.

III. DESCRIPTION OF THE STATE

A. Introduction

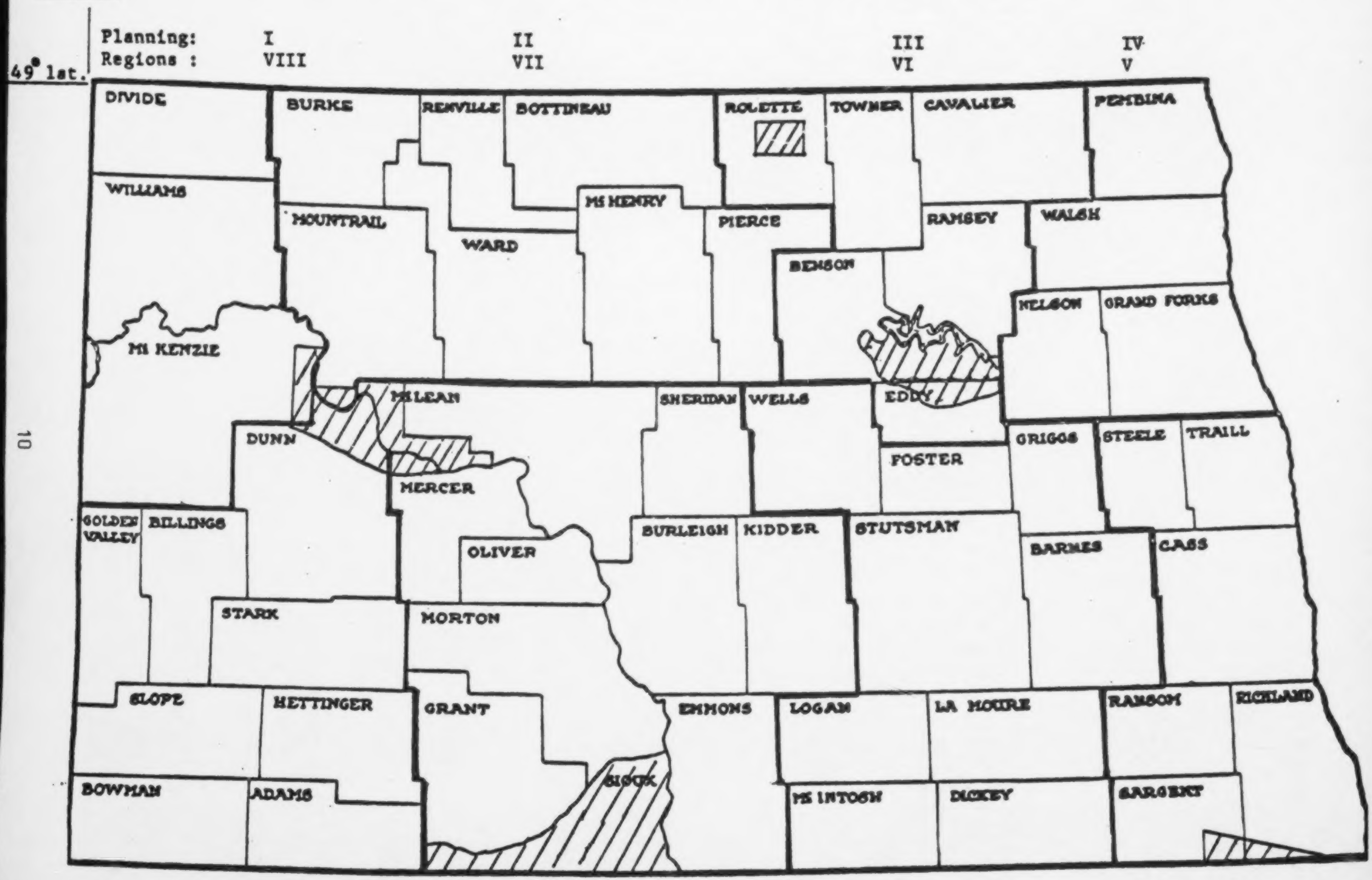
The purpose of this chapter is to provide an overview of the population and ecology of the state of North Dakota. Part B of this chapter identifies the geographic location of the state and provides a map showing its major internal political boundaries. A companion to Part B is Appendix I, which contains maps and descriptive information concerning the state's topography and weather patterns. An overview of the drought of 1980, Part C, precedes a discussion of preliminary tabular data from the 1980 Census of Population and Housing.

B. Geographic Location, Physical Characteristics, Political Boundaries

North Dakota lies in the central portion of the Northern Plains and has many physical and social characteristics similar to the Province of Manitoba on its northern border and South Dakota on its southern border. The Northern Plains States and Provinces are a transition area between the humid eastern and the western desert-mountain regions. The basic industry in the North Central Plains has historically been agriculture, and population density tends to coincide with the greater amount of rainfall on the eastern edge of the region and the lesser amounts of precipitation occurring in the west. Since the late 1800s, major transportation networks have been oriented in a west-to-east direction, reflecting the economics of exporting raw agricultural goods. The Northern Plains region, and particularly North Dakota, has historically been and continues to be an exporter of raw materials and an importer of finished goods.

Figure I shows the major political boundaries within the state. The 70,665 square miles of the state are divided into 53 counties and 8 planning regions. In addition, the boundaries of three American Indian reservations lie entirely within the state, and the boundaries of two other reservations are shared with South Dakota. With a population of 652,695, there are 9.2 persons per square mile in North Dakota, compared to 60 persons per square mile in the United States.

Figure I: Map of North Dakota Counties, Regions, and Reservations



Reservations: ▨ Fort Berthold

Fort Yates

Turtle Mt.

Fort Totten

Sisseton

1. The Drought of 1980

Last fall's barren pastures and plowing were unable to hold the inconsequential precipitation that fell during the winter of 1979-1980. Spring winds relieved the state of a considerable amount of topsoil, and from the first week of May to mid-August, approximately 95 percent of the state's counties were reporting subsoil moisture as being far below minimum requirements for crop development.(2)[1/] By the time October arrived, winds again brought dust storms, and some were suggesting that "the entire state had suffered $1.3 billion in damage to crops, livestock, farm buildings, and equipment due to drought, hail, and excessive rain . . ."(3) The negative economic effects of the 1980 drought (reduced capital formation, reduced tax revenues, lost retail sales and wages, unemployment and profit loss in durable manufacturing, and other industries, etc.) are likely to persist to some degree for an indefinite period.

Dry years and drought are by no means unusual circumstances on the Great Plains.(4:12-23) But this year's drought appears to have a broader and somewhat different meaning in comparison to our most recent previous experience. Even though drought and flood[2/] reduced average per acre yields for major crops by 25-30 percent from 1973 to 1974, yields and farm income rose to a better than decade-long average during 1975. Largely because of agriculture's dominant role, North Dakota's economy remained fairly aloof from the 1974-1975 recession. These circumstances lent some validity to the view that North Dakota's economy is largely autonomous, secure, and healthy in the face of national recession. (See 5)

In the meantime (1973-1979), North Dakota's economy grew and diversified in basic and high wage industries. These were industries dominated by male artisans, craftsmen, and small entrepeneurs. Jobs in mining increased by 3,690, for example,

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[1/] Underscored numbers in parenthesis refer to literature cited.

[2/] For an overview and assessment of the economic impacts of flooding in North Dakota, see "The Role of Wetlands in Providing Flood Control Benefits," Len Cernohous, North Dakota Outdoors, February 1980.

while manufacturing and construction jobs increased by 3,980 and 6,540 jobs, respectively.

Energy resource and manufacturing development were promoted with the idea that although these industries are often affected by national business trends (boom-recession), economic diversification would have an offsetting effect during those years when agricultural prices/ weather brought the state into a downturn. It was also assumed that agriculture would continue to fulfill its counter cyclical function. The notion that a diversified economy would make employment over the course of a year less seasonal, and the economy as a whole more stable, is appealing. On the other hand, the possibility was less often mentioned that in the process of fostering a more diversified and less seasonal economy, there was a trade-off in terms of tying ourselves to national economic trends and credit systems.

Similarly, between 1973 and 1979, there was little discussion of what increasing farm size, and the accompanying increase in capital intensity of agriculture, might mean in terms of linking the cost of agricultural inputs to national credit systems. The consequences of capital intensity in agriculture, and the restructuring of the international oil market since the last recession, began to imply, for some, that perhaps North Dakota was not as recession proof as it was in 1974-1975, and still thought it was in late 1979 and 1980.

During the drought, the issue of how closely agriculture was becoming tied to the national economy assumed less importance than the abandonment of crops and premature cattle sales. At the end of the drought, however, concerns have arisen over how deeply next year's high interest rates will cut into 1981 net farm income during what is expected to be an otherwise good year for agriculture.

The effect of the 1980 drought on our economy can be estimated, but the challenge to the idea that agriculture can no longer be counted upon as a counter cyclical industry (whether the cause is its increasing need for capital or drought) is another matter. The fact that North Dakota did not pass unscathed through the recession of 1980-198? (and that nonagricultural diversification ties us more closely to national events) represents a challenge to our notion of economic vulnerability and forces the people of the state to take a greater interest in, and new orientation towards, national and international economies.

C. Population

THE PROGRESS AND DEVELOPMENT OF THE TERRITORY DURING THE PAST YEAR

> The Territory has had another year of wonderful growth in population and wealth. The reports from all sections tell of a decided increase of immigration as compared with the same date of last year, and that the rush of newcomers has kept well up to the average of previous seasons. As a matter of course the localities along the line of the railway extensions, and the districts having large areas of the public domain subject to entry under the homestead and pre-emption laws, are receiving the greatest number of settlers. Generally speaking, the people who go West to find homes are those of limited means, either having met with reverses or else just making a start in life, and are attracted to a new country by the cheapness of the lands. Therefore, it is quite to be expected, so long as there remains land to be had for the asking, with just as rich soil, just as nutritious pasturage as that of the older settled regions, the larger percent of the home-seekers will flow into those counties where the whistle of the locomotive is never heard or where the sound is a reverberation from the distance.

-Resources of Dakota 1887-
An official Publication Compiled by the
Commissioner of Immigration, Territory of
Dakota: Department of Immigration and Statistics
Pierre

1. Introduction

Prior to the release of 1980 preliminary population count data, which showed that the state had a 1980 population of 652,222, some projections of the state's population had overestimated the actual figure by as much as 21.1 percent. A projection of 669,000 for 1980 could only have been accurate if the state had experienced no outmigration and retained all of the people it had produced. However, we know that this is not the case. Indeed, for every two persons added to North Dakota's population from 1970 to 1980, one person left the state.

The illusion of population increase above the increase actually taking place was fostered by rapid population growth among those aged 16-44, and the household formation, employment, and consumption patterns associated with this age group. The city of Valley City, for example, decreased in population by 1 percent (to 7,771 persons) but experienced a 20.1 percent increase in the number of housing units (to 3,266 units),[1] and a 30 percent increase in employment.[2]

With rapid housing and employment growth, it is difficult to imagine that any community would evolve an acute awareness of population loss. The available data from the 1980 Census shows, however, that many areas of the state lost population but gained in the number of housing units.

Other data, most notably from the North Dakota Department of Public Instruction and the Social Security Administration (see Appendix Tables Ia and Ib), provide information on particular population segments and a basis for estimating change in the age/sex composition of the state's population from 1970-1980. The purpose of this section is to introduce the available preliminary 1980 population data, underscore some of the major changes and parallels since the last census, and suggest how population trends and economic change have combined in reshaping North Dakota's character.

2. Population Increase and Age Distribution

Between 1970 and 1980, North Dakota's population increased by 34,430 (5.6 percent), to 652,222 persons (Table 1). This increase is in substantial contrast to the period 1960-1970 when the state decreased in population by 14,685 persons. The 1970-1980 increase, however, does not represent a mere reversal of the previous decade's decline. Accompanying the recent population increase were major age distribution changes, a geographic shifting of the population, and a continuation of the rural-to-urban migration that was characteristic of the previous decade.

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[1] Housing units include both occupied and unoccupied dwellings intended for occupancy.

[2] Population and housing data refer to the period 1970-1980. Employment data are for the period 1970-1979; during that period, nonagricultural wage and salary employment in Valley City increased from 2,670 to 3,470.

Age distribution changes since 1970 are associated with major and fundamental changes in nearly every sphere of human conduct. Age distribution data are presented in Table 2.[3/] These data indicate there has been a substantial decrease over the past decade in the number of individuals aged 15 and younger, and 20 percent plus increases in all other age groups with the exception of those aged 45-64. Viewed from a slightly different perspective, in 1970 there were 1.7 adults (ages 16-64) per child (ages 0-15), while in 1980 there were 2.5 adults per child. The change in the ratio of adults to elderly (ages 65+) has been less radical, moving from 5.1 in 1970 to 4.9 in 1980.

Table 1

North Dakota Population By Decade, 1920-1980

Year	Population	% Change
1920	646,872	-
1930	680,845	5.3
1940	641,935	-7.7
1950	619,636	-3.5
1960	632,446	2.1
1970	617,792	-2.3
1980	652,222	5.6

[3/] Age distribution estimates of the civilian population are based on: 1980 Census Bureau preliminary totals, demographic data from the Minot and Grand Forks Air Force Bases, the Current Population Survey for 1977-1979, and the data presented in Appendix Tables Ia and Ib. Detailed sex and race population estimates are provided as Table Ic.

Data from the 1980 Census indicates that 95.8 percent of the population is White, 3.1 percent of the population is classified as American Indian, with 1.1 percent classified as Black, Asian, of Spanish origin, or "other." The American Indian population now stands at 20,157, which represents a 40.3 percent (5,788) increase over the past ten years.

The transformation of the age structure into a primarily working age and older population has had, and will continue to have, a strong affect on consumption patterns and employment. The age structure of the state's population has influenced such diverse areas as crime, divorce, poverty rates, patterns of retail sales, the demand for medical and educational services, and employment related to that demand.

With "the number of (high school) graduates . . . projected to decline from 11,278 to 7,716 during the years from 1979 through 1986,"(6:6) it is clear that the amount of employment in government educational services (in October 1980, 45.5 percent of all government employment), and the way government provides services, are under considerable population pressure to change.

Table 2

Civilian Population By Age, 1970 and 1980 (Estimate)

	1970		1980		1970-1980 Change	
Age	N	%	N	%	N	%
0-5	63,121	10.4	54,300	8.5	-8,821	-14.0
6-15	136,564	22.5	107,900	16.8	-28,664	-21.0
16-24	96,526	15.9	116,100	18.1	19,574	20.3
25-44	122,380	20.2	157,600	24.6	35,220	28.8
45-64	121,935	20.1	124,200	19.4	2,265	1.9
65+	66,357	10.9	80,500	12.6	14,143	21.3
TOTAL	606,883	100.0	640,600	100.0	33,717	5.6

Those aged 65 and over also represent a significant population segment receiving specialized governmental and private services (i.e., medical) and this population segment too is changing. The elderly increased in number by 14,143 over the decade, a 2.1 percent per annum increase. Over the next few years, barring significant changes in migration, it must be assumed that this rate of increase for the elderly will be maintained. Each age group in Table 2 represents a population segment which has specialized market demand characteristics and requires specialized services. Rapid population change requires business and government adaptation to changing circumstances.

However, these changing circumstances may not be as straightforward as one might assume from a review of age structure data alone. Since age structure is associated with geographic location, it is evident that services and market areas for youth, adults, and the elderly are a determinant of how and where retail establishments, transportation systems, and employment are located. With 56.3 percent of those aged 17 and under residing in nine urban counties[4/] (see Appendix Table Ia), and only 44.5 percent of the elderly (see Appendix Table Ib) residing in those same counties, it is clear that certain economies of scale can be achieved in sales and services to youth that are not attainable for the elderly, primarily rural consumer.

But nowhere is the interaction among population, the market, and employment illustrated more dramatically than in the housing industry. Partly as a reflection of age structure changes, employment and income opportunities, and the lifestyles of the baby boom generation and their parents, housing over the decade has grown nearly five times faster than population. Illustrated in Table 3 are population and housing data, which show that while population increased by 5.6 percent over the decade, the number of housing units increased by 27.3 percent. As a result, the number of persons per housing unit decreased from 3.01 in 1970 to 2.5 persons per housing unit in 1980.

Precisely how much of the increase in housing is due to population growth and what proportion is due to age/lifestyle change and other factors is difficult to estimate. Over the

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[4/] For purposes of this report, the nine "urban" counties are: Williams, Ward, Ramsey, Grand Forks, Cass, Stutsman, Burleigh, Morton, and Stark.

Table 3
Population and Housing Unit Counts
1970 and 1980

		1970					1980					1970-1980 Changes			
		Population			Housing	Popl./	Population			Housing	Popl./				
		County		Region	County	Housing	County		Region	County	Housing	Population		Housing	
		N	%	%	N	X̄	N	%		N	X̄	N	%	N	%
1.	Williams	19,301	64.4		6,780	2.85	22,263	67.7		8,948	2.49	2,962	15.3	2,168	32.0
	Divide	4,564	15.2		1,667	2.74	3,483	10.6		1,779	1.96	-1,081	-23.7	112	6.7
	McKenzie	6,127	20.4		2,227	2.75	7,137	21.7		2,913	2.44	1,010	15.6	686	30.8
	REGION 1 TOTAL	29,992	100.0	4.9	10,674	2.81	32,883	100.0	5.0	13,640	2.41	2,891	9.6	2,966	27.8
2.	Ward	58,560	58.3		17,402	3.37	58,266	60.3		21,417	2.72	-294	-0.5	4,015	23.1
	Bottineau	9,496	9.6		4,009	2.37	9,243	9.6		4,664	1.98	-253	-2.7	655	16.3
	Burke	4,739	4.7		1,813	2.61	3,794	3.9		1,814	2.09	-945	-19.9	1	0.06
	McHenry	8,977	8.9		3,223	2.79	7,850	8.1		3,435	2.29	-1,127	-12.6	212	6.6
	Mountrail	8,437	8.4		3,176	2.66	7,663	7.9		3,196	2.40	-774	-9.2	20	0.6
	Pierce	6,323	6.3		2,076	3.05	6,175	6.4		2,381	2.59	-148	-2.3	305	14.7
	Renville	3,828	3.8		1,395	2.74	3,591	3.7		1,527	2.35	-237	-6.2	132	9.5
	REGION 2 TOTAL	100,360	100.0	16.2	33,094	3.03	96,582	100.0	14.8	38,434	2.51	-3,778	-3.8	5,340	16.1
3.	Ramsey	12,915	26.0		4,387	2.94	13,026	26.9		5,255	2.48	111	0.9	868	19.8
	Benson	8,245	16.6		2,718	3.03	7,949	16.4		3,079	2.58	-296	-3.6	361	13.3
	Cavalier	8,213	16.5		2,932	2.80	7,621	15.7		3,117	2.45	-592	-7.2	185	6.3
	Towner	4,645	9.4		1,684	2.76	4,048	8.4		1,690	2.40	-597	-12.8	6	0.4
	Eddy	4,103	8.3		1,477	2.78	3,554	7.3		1,539	2.31	-549	-13.4	62	4.2
	Rolette	11,549	23.2		3,015	3.83	12,199	25.2		3,917	3.11	650	5.6	902	29.9
	REGION 3 TOTAL	49,670	100.0	8.0	16,213	3.06	48,397	99.9	7.4	18,597	2.60	-1,273	-2.6	2,384	14.7
4.	Grand Forks	61,102	65.1		18,192	3.36	66,088	68.1		24,546	2.69	4,986	8.2	6,354	34.9
	Nelson	5,807	6.2		2,214	2.62	5,218	5.4		2,437	2.14	-589	-10.1	223	10.1
	Walsh	16,251	17.3		5,307	3.06	15,381	15.8		6,152	2.50	-870	-5.4	845	15.9
	Pembina	10,728	11.4		3,849	2.76	10,386	10.7		4,435	2.34	-342	-3.2	586	15.2
	REGION 4 TOTAL	93,888	100.0	15.2	29,562	3.18	97,073	100.0	14.9	37,570	2.58	3,185	3.4	8,008	27.1

5.	Cass	73,653	62.4		24,278	3.03	88,434	66.7		35,259	2.51	14,781	20.1	10,981	45.2
	Traill	9,571	8.1		3,529	2.71	9,629	7.3		3,923	2.45	58	0.6	394	11.2
	Steele	3,749	3.2		1,394	2.69	3,112	2.3		1,446	2.15	-637	-17.0	52	3.7
	Ransom	7,102	6.0		2,602	2.73	6,714	5.1		2,711	2.48	-388	-5.5	109	4.2
	Richland	18,089	15.3		5,749	3.15	19,197	14.5		7,176	2.68	1,108	6.1	1,427	24.8
	Sargent	5,937	5.0		2,025	2.93	5,512	4.1		2,212	2.49	-425	-7.2	187	9.2
	REGION 5 TOTAL	118,101	100.0	19.1	39,577	2.98	132,598	100.0	20.3	52,727	2.52	14,497	12.3	13,150	33.2
6.	Stutsman	23,550	29.8		7,741	3.04	24,159	32.0		9,666	2.50	609	2.6	1,925	24.9
	Wells	7,847	9.9		2,881	2.72	6,983	9.3		2,886	2.42	-864	-11.0	5	0.2
	McIntosh	5,545	7.0		1,982	2.80	4,791	6.4		2,195	2.18	-754	-13.6	213	10.7
	Logan	4,245	5.4		1,384	3.07	3,474	4.6		1,418	2.45	-771	-18.2	34	2.5
	Foster	4,832	6.1		1,649	2.93	4,616	6.1		1,828	2.55	-216	-4.5	179	10.9
	Dickey	6,976	8.8		2,471	2.82	7,206	9.6		2,840	2.54	230	3.3	369	14.9
	LaMoure	7,117	9.0		2,550	2.79	6,476	8.6		2,528	2.56	-641	-9.0	-22	-0.9
	Barnes	14,669	18.6		5,302	2.77	13,949	18.5		5,977	2.33	-720	-4.9	675	12.7
	Griggs	4,184	5.3		1,658	2.52	3,719	4.9		1,738	2.14	-465	-11.1	80	4.8
	REGION 6 TOTAL	78,965	99.9	12.8	27,618	2.86	75,373	100.0	11.6	31,076	2.28	-3,592	-4.5	3,458	12.5
7.	Burleigh	40,714	39.1		12,983	3.14	54,784	44.0		20,838	2.63	14,070	34.6	7,855	60.5
	McLean	11,251	10.8		4,282	2.63	12,359	9.9		5,749	2.15	1,108	9.8	1,467	34.3
	Sheridan	3,232	3.1		1,202	2.69	2,812	2.3		1,181	2.38	-420	-13.0	-21	-1.7
	Kidder	4,362	4.2		1,505	2.90	3,871	3.1		1,736	2.23	-491	-11.3	231	15.3
	Emmons	7,200	6.9		2,167	3.32	5,838	4.7		2,316	2.52	-1,362	-18.9	149	6.9
	Morton	20,310	19.5		6,317	3.22	24,951	20.0		9,318	2.68	4,641	22.9	3,001	47.5
	Mercer	6,175	5.9		2,253	2.74	9,421	7.6		3,971	2.37	3,246	52.6	1,718	76.3
	Oliver	2,322	2.2		753	3.08	2,504	2.0		963	2.60	182	7.8	210	27.9
	Grant	5,009	4.8		1,649	3.04	4,282	3.4		1,967	2.18	-727	-14.5	318	19.3
	Sioux	3,632	3.5		943	3.85	3,633	2.9		1,053	3.45	1	0.03	110	11.7
	REGION 7 TOTAL	104,207	100.0	16.9	34,054	3.06	124,455	99.9	19.1	49,092	2.54	20,248	19.4	15,038	44.2
8.	Stark	19,613	46.0		5,748	3.41	23,703	52.8		8,478	2.80	4,090	20.9	2,730	47.5
	Slope	1,484	3.5		477	3.11	1,171	2.6		514	2.28	-313	-21.1	37	7.8
	Hettinger	5,075	4.9		1,579	3.20	4,275	9.5		1,665	2.57	-800	-15.8	86	5.4
	Golden Valley	2,611	6.1		915	2.85	2,401	5.4		1,038	2.31	-210	-8.0	123	13.4
	Dunn	4,895	11.5		1,605	3.05	4,626	10.3		1,849	2.50	-269	-5.5	244	15.2
	Bowman	3,901	9.2		1,365	2.86	4,241	9.5		1,728	2.45	340	8.7	363	26.6
	Billings	1,198	2.8		1,198	3.06	1,132	2.5		1,132	2.20	-66	-5.5	-66	-5.5
	Adams	3,832	9.0		1,317	2.91	3,312	7.4		1,452	2.28	-520	-13.6	135	10.3
	REGION 8 TOTAL	42,609	100.0	6.9	14,204	3.00	44,861	100.0	6.9	17,856	2.51	2,252	5.3	3,652	25.7
STATE TOTAL		617,792		100.0	204,996	3.01	652,222		100.0	260,973	2.5	34,430	5.6	55,997	27.3

decade, the state increased its net number of housing units by 55,977. If housing had increased in proportion to population at a ratio of 3.01 persons per housing unit (the ratio it had in 1970), we would have needed a net gain of only 11,689 housing units for the decade. It can be suggested then, that approximately 20.9 percent of the housing units added over the decade were added to accommodate our population increase, and that the remaining 44,308 (79.1 percent) of the added housing units resulted from age structure and social change. One can see, for example, in Nelson County (Table 3) that a 10.1 percent decrease in population was countered with a 10.1 percent increase in the number of housing units from 1970 to 1980. Population has not been a necessary element in the growth of housing units.

Measuring the economic impact[5] of increasing numbers of housing units, and forecasting[6] the continued demand for housing are tenuous efforts at best. Measurement of economic impacts can be made especially difficult if one considers, for example, the capital costs of extending city services, utilities, and so forth, as part of the total economic system. (The picture can be further complicated if one wishes to consider as a deficit the inefficiency--i.e., per capita capital expenditures--of providing the same types of services to a continually declining number of persons per household.) From the standpoint of employment, the measurement of industry specific increases are comparatively simple (in Buildings Construction-SIC 15 the number of jobs increased by 22 percent--from 4,650 to 5,680 over the period 1975 to 1979). Measurement of secondary and tertiary employment related to housing growth--i.e., durable goods manufacture, construction materials wholesaling and transportation--on the other hand, is a far more difficult task.

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[5] "Economic impact" in the broad sense means that consideration be given to the observation that "We need to make huge capital investments in energy production, energy conservation, and modernization of our industrial plant and equipment to compete in world markets. Yet more American capital flows into mortgages for housing than into any other single use . . . ."(8:1)

[6] One national forecast indicates that the number of households will grow by 11.3 percent between 1980 and 1985.(9:51)

What can be concluded from these data, however, is that through population growth and age structure change, the decade of the '70s was a period of rapid growth in those age groups supplying new entrants to the labor market. The baby boom generation is not only a generation looking for work but a generation looking for the kind of earnings that meet the post World War II consumption expectations associated with an increasing standard of living. "Once our affluent generation . . . (the baby boom generation) . . . was economically disadvantaged by the competition of its own numbers. Each time the baby boom generation climbed into an older age group, the unemployment rate shot up in that age group while its earning power declined. The difficulties were made all the harder to bear because the baby-boom generation's lengthy education had nurtured such high expectations."(7:20) A high demand for jobs, income, and consumer goods raises the very serious issue of whether or not this society and its economy can supply goods at a faster pace than it supplies jobs and income. To the extent that it cannot, raises the even more serious economic question of inflation and the political question of alienation from the "system."

3. Geographic Redistribution

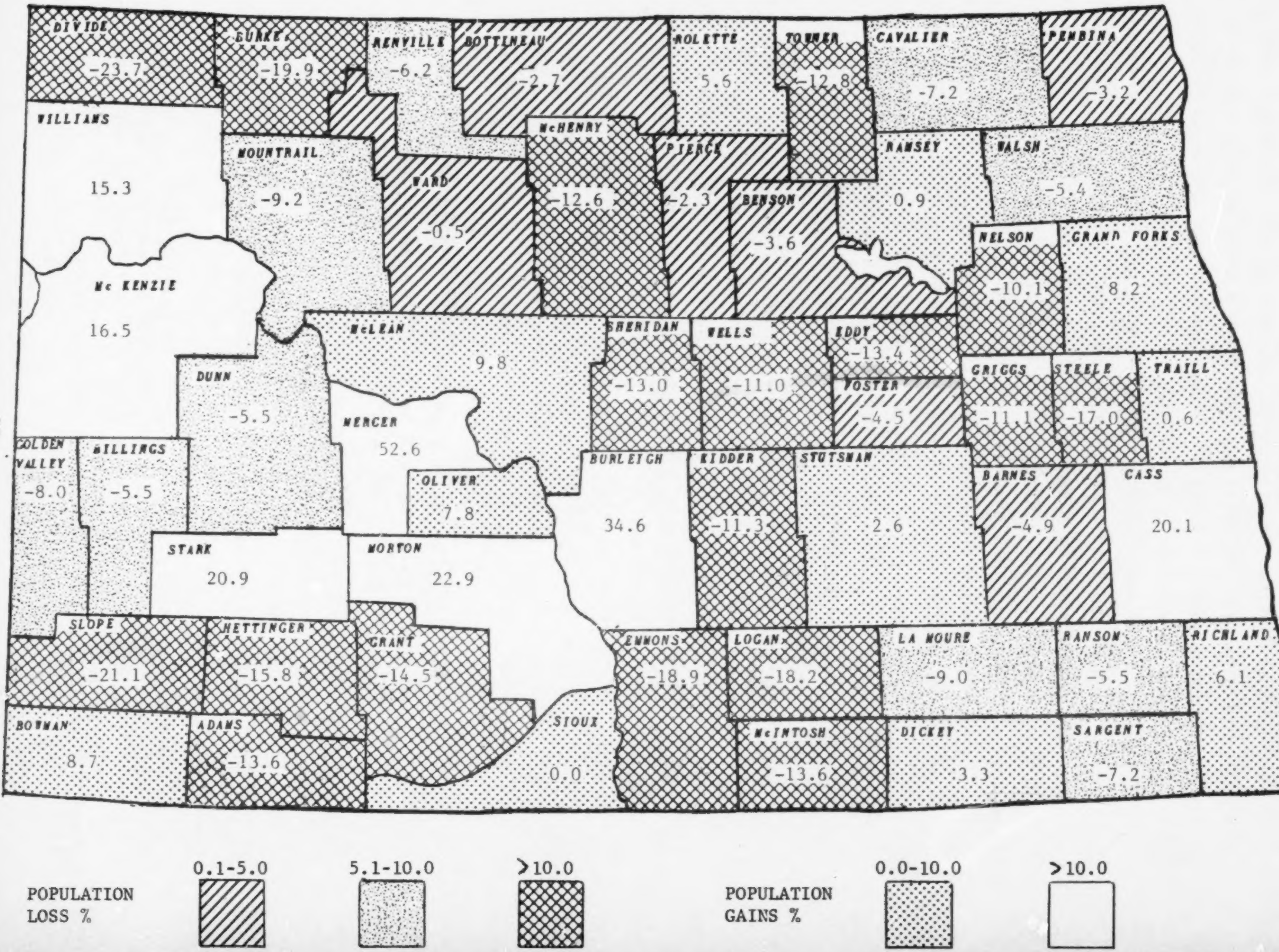
For most of North Dakota, population change between 1970 and 1980 was a reflection, although at a reduced rate, of the out-migration and net population decrease that occurred between 1960 and 1970. As is shown in Table 3, and illustrated in Figure II, even though the state as a whole gained population, 35 of 53 counties in the state lost population.

Between 1960 and 1970, 47 counties in North Dakota lost population; between 1970 and 1980, 34 of these same counties again lost population. Most counties losing population for two consecutive decades were located either along the Missouri Coteau-Coteau Slope region, which runs diagonally across the state from northwest to southeast (see Appendix Table Ia), and/or fall in the boundary areas between the state's "Complete Shopping Centers" (shown in Chapter V, Figure V). On the average, counties losing population for two consecutive decades

Table 4
Population Change: 1970-1980 Net Change and Migration By County

		Population Change 1970-1980		Migration as a Proportion of 1970 Population	
		N	%	N	%
1.	Williams	2,967	15.3	1,331	6.9
	Divide	-1,081	-23.7	-1,143	-25.0
	McKenzie	1,010	15.6	526	8.9
	REGION I TOTAL	2,891	9.6	714	2.4
2.	Ward	-294	-0.5	-9,482	-16.2
	Bottineau	-253	-2.7	-542	-5.7
	Burke	-945	-19.9	-1,022	-21.6
	McHenry	-1,127	-12.6	-1,452	-16.2
	Mountrail	-774	-9.2	-1,144	-13.6
	Pierce	-148	-2.3	-496	-7.8
	Renville	-237	-6.2	-391	-10.2
	REGION II TOTAL	-3,778	-3.8	-14,529	-14.5
3.	Ramsey	111	0.9	-533	-4.1
	Benson	-296	-3.6	-929	-11.3
	Cavalier	-592	-7.2	-1,169	-14.2
	Towner	-597	-12.8	-686	-14.8
	Eddy	-549	-13.4	-619	-15.1
	Rolette	650	5.6	-1,499	-13.0
	REGION III TOTAL	-1,273	-2.6	-5,435	-10.9
4.	Grand Forks	4,986	8.2	-4,374	-7.2
	Nelson	-589	-10.1	-341	-5.9
	Walsh	-870	-5.4	-1,470	-9.0
	Pembina	-342	-3.2	-807	7.5
	REGION IV TOTAL	3,185	3.4	-6,992	7.4
5.	Cass	14,781	20.1	7,707	10.5
	Traill	58	0.6	-84	-0.9
	Steele	-637	-17.0	-733	-19.6
	Ransom	-388	-5.5	-447	-6.3
	Richland	1,108	6.1	397	2.3
	Sargent	-425	-7.2	-683	-11.5
	REGION V TOTAL	14,497	12.3	6,157	5.2
6.	Stutsman	609	2.6	-750	-3.2
	Wells	-864	-11.0	-985	-12.6
	McIntosh	-754	-13.6	-711	-12.8
	Logan	-771	-18.2	-930	-21.9
	Foster	-216	-4.5	-478	-9.9
	Dickey	230	3.3	0	0.0
	LaMoure	-641	-9.0	-796	-11.2
	Barnes	-720	-4.9	-1,123	-7.7
	Griggs	-465	-11.1	-493	-11.8
	REGION VI TOTAL	-3,592	-4.5	-6,266	-7.9
7.	Burleigh	14,070	34.6	8,605	21.1
	McLean	1,108	9.8	464	4.1
	Sheridan	-420	-13.0	-518	-16.0
	Kidder	-491	-11.3	-752	-17.2
	Emmons	-1,362	-18.9	-1,684	-23.4
	Morton	4,641	22.9	2,469	12.2
	Mercer	3,246	52.6	2,803	45.4
	Oliver	182	7.8	-31	-1.3
	Grant	-727	-14.5	-956	-19.1
	Sioux	1	0.03	-629	-17.3
	REGION VII TOTAL	20,248	19.4	9,771	9.4
8.	Stark	4,090	20.9	2,206	11.2
	Slope	-313	-21.1	-442	-29.8
	Hettinger	-800	-15.8	-1,008	-19.9
	Golden Valley	-210	-8.0	-340	-13.0
	Dunn	-269	-5.5	-561	-11.5
	Bowman	340	8.7	54	1.4
	Billings	-66	-5.5	-168	-14.0
	Adams	-520	-13.6	-657	-17.1
	REGION VIII TOTAL	2,252	5.3	-916	-2.2
	STATE TOTAL	34,430	5.6	-17,496	-2.8

Figure II: Map of North Dakota Population Change 1970-1980 by County



lost population at only 60.3 percent of their 1960-1970 rate of loss. For two-thirds of the state's counties then, and for the foreseeable future, the situation has been one of outmigration and reduced population.

Even more counties experienced outmigration than registered a net population decrease. In total, 42 counties (Table 4) experienced outmigration. Some counties, in particular urban counties (i.e., Ramsey and Grand Forks), registered net population increases but also experienced substantial outmigration. Most commonly (in 33 counties), however, counties experiencing a net population decrease lost more people to outmigration than the total "net loss" figures would suggest.[7/]

Outmigration data indicates that, as has been the case since 1930, North Dakota produces more people than its economy can support. The effects of migration on population density are illustrated in Figure III. Population density tends to decrease from the east and southeast to the west and northwest (for tabular data see Table 15). At the same time, per person unit costs of providing goods and services increases as population density decreases.

Twelve counties which lost population from 1960 to 1970 gained population from 1970 to 1980. Most of these "turnaround" counties are in energy impact areas and registered rapid population increases (i.e., 52.6 percent in Mercer County), or are counties with an urban center. Even so, once the dust created by rapid energy development settled, only 12 (22.6 percent) of North Dakota's counties (and seven of those counties were outside energy impact areas) had a 1980 population that met, or was larger than, their 1960 population.

The data in Table 5 illustrates the effects of population increase and redistribution on community structure. The proportion of the population found in major cities increased from

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[7/] The general formula used to count outmigration in these 33 counties involves subtracting the number of deaths from the number of births for the decade 1970-1980 and subtracting the result (the natural increase) from the net change in population. There were only two counties, Nelson and McIntosh, where the number of deaths exceeded the number of births.

Figure III: Population Density (Persons Per Square Mile) 1980 and (1960) by County

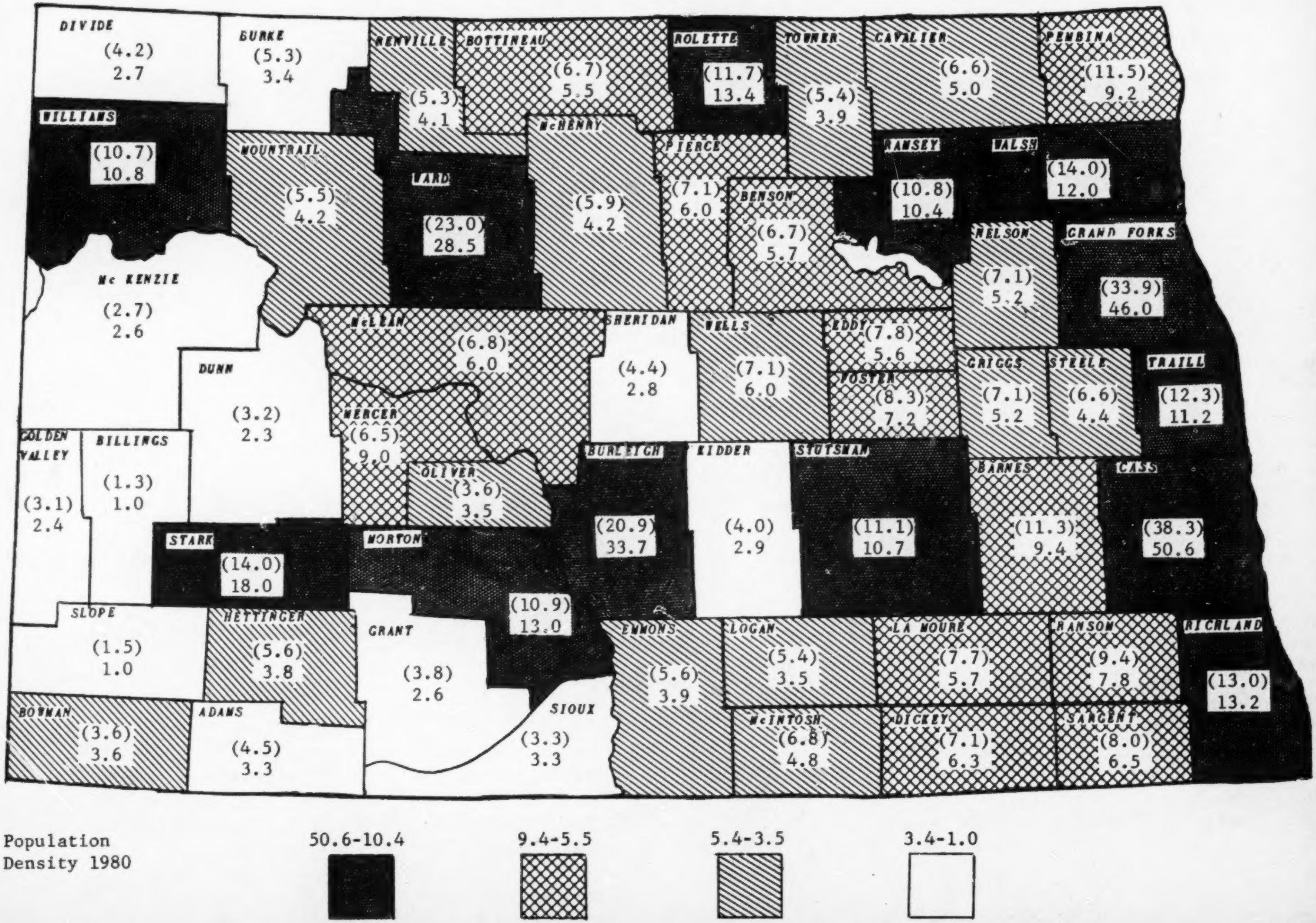

Table 5

Population by Region, Major City, Other Incorporated Areas, and Unincorporated Areas 1980, and Statewide 1970

Region/ Major City	I: Williston		II: Minot		III: Devils Lake		IV: Grand Forks		Total: Statewide 1970	
Population	N	%	N	%	N	%	N	%	N	%
Major City	13,354	40.6	32,886	34.1	7,441	15.4	43,760	45.1	218,607	35.4
Other Incorporated Areas	7,832	23.8	24,928	25.8	15,050	31.1	24,107	24.8	175,227	28.4
Unincorporated Areas	11,697	35.6	38,768	40.1	25,906	53.5	29,206	30.1	223,958	36.2
Total	32,883	100.0	96,582	100.0	48,397	100.0	97,073	100.0	617,792	100.0
Other Incorporated Areas										
Number	17		62		43		40		347	
Average Size	461		402		350		603		505	

Region/ Major City	VIII: Dickinson		VII: Bismarck-Mandan		VI: Jamestown		V: Fargo		Total: Statewide 1980	
Population	N	%	N	%	N	%	N	%	N	%
Major City	15,893	35.4	59,825	48.1	16,281	21.6	61,281	46.2	250,721	38.4
Other Incorporated Areas	13,557	30.2	27,379	22.0	31,774	42.2	43,940	33.1	188,567	28.9
Unincorporated Areas	15,411	34.4	37,251	29.9	27,318	36.2	27,377	20.6	212,934	32.7
Total	44,861	100.0	124,455	100.0	75,373	100.0	132,598	99.9	652,222	
Other Incorporated Areas										
Number	26		48		59		59		354	
Average Size	521		570		539		745		533	

35.4 percent in 1970 to 38.4 percent in 1980. At the same time, unincorporated areas decreased (both numerically and proportionally) from 36.2 percent to 32.7 percent of the population. The proportion of the population in small communities (other incorporated areas) changed by less than a percentage point over the decade. Although there is a significant variation from planning region to planning region in the proportion of the population living in major cities, the overall trend has been for the dominant community in each region to grow and for the outlying areas to remain nearly stable or decrease in population.

In addition to rural to urban population shifts, North Dakota's population became more evenly distributed across the geopolitical regions of the state. The total population gain in the state was 43,073 (nearly the present total population of Planning Region VIII), with 58.9 percent of this increase in the west (Planning Regions I, VII, and VIII), and 41.1 percent of the growth in the east (Planning Regions IV and V). Central and northwest central portions of the state (Planning Regions II, III, and VI) experienced a population decrease of 8,643, reducing the net population gain in the state to 34,430. Ten years ago, the central portion of the state had the largest concentration of people in the state. From 1970 to 1980, the proportion of the population in the central part of the state decreased from 37 percent to 33.8 percent. The Red River Valley now holds 35.2 percent of the population while ten years ago it accounted for 34.3 percent. The west's share of the population, in the meantime, increased from 28.7 percent to 31.0 percent of the total. Although population densities vary significantly across the state, in 1980 there was a far more equitable distribution of the population from the Red River Valley to the West River district than there was in 1970.

Most models of population movement implicitly assume that " . . . levels of migration and population change . . . result from an excess of employment demands or an excess of available labor."(10:139) Indeed, the rapid increase in employment opportunities in the west and southwest can be used to explain a substantial proportion of the population movement into selected counties.[8/] Moreover, as the data in Chapter V, Part E, shows, net real farm income has vacillated widely or remained within a very narrow low range over the decade. Moderate and unpredictable farm income levels are probably responsible for a substantial amount of rural to urban migration. But job availability and economic reasons are not the only, nor are they necessarily the major, reasons for migration.

To some extent, the lack of housing and local costs of living in certain oil exploration impact counties have inhibited inmigration. Quality of life, service availability, and cultural variables are also determinants of migration. Recent research has indicated that the level of community attachment and involvement in community affairs is a determinant of geographic mobility.(11) Others have suggested that a significant factor in rural to urban migration is the value the city represents as a cultural phenomenon. In this statement of the problem of explaining migration, geographic mobility can be at least partially explained by the view that "The city . . . (is) . . . a total social unit which attracts or repels people . . ."(12:76) If economic circumstances and job availability were the only factors affecting population mobility, then unemployment rates in the state's various counties would, over time, tend to gravitate toward the state average. However, the fact that there is wide variation from county to county in unemployment suggests that noneconomic factors play a significant role in population movement.

4. Summary

Population increase and demographic change, interacting within a conventional economic and social environment, have served to bring about some fairly radical changes in the character of the state. Because the number of adults has grown far

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[8/] State and county level employment data appropriate to the economic-demographic analysis of population migration are presented in Chapter VI and Appendix II, the previous issue of the Annual Planning Report, and in other Job Service publications.

faster than the population as a whole, the employment-related income base relative to the size of the population is far larger now than at any point in the state's history. In 1890, three years after the quote introducing this section was written, there were 1.4 adults (ages 16-64) per child. In 1940 and 1950, when the parents of the present baby boom generation were entering the labor market and establishing households there were, respectively, 1.95 and 1.82 adults per child. At some point between 1970 and 1980 the proportion of adults in the population rose to 2.5 times the number of children and we entered a period which is, in demographic terms, revolutionary in character. Related to this demographic change are major economic and social changes. With the rate of employment, housing, rural to urban migration, and population growth in the east and west exceeding the general rate of population growth, economic, social, and family life has come to mean something quite different than a simple enlargement of what existed ten years ago. But the meaning, and certainly a substantial proportion of the consequences of demographic change, are either not recognized as being the result of historical processes, or are poorly documented. The remaining chapters of this publication focus on activity in the labor market, characteristics of the labor force, employment and unemployment statistics--all part of an inventory of changing economic and social circumstances that are in continuous interaction with the state's population.

IV. LABOR FORCE CHARACTERISTICS AND TRENDS

Over the past ten years the population grew by 5.6 percent (34,934), and the labor force[1/] grew by 39.1 percent (93,260). In contrast, during the previous decade (1960-1970) the population decreased by 2.3 percent and the labor force declined by 6.5 percent. Growth in the labor force is, in an immediate sense, a function of economic, demographic, and social forces. These forces exerted an uneven pressure on the labor market from 1970 to 1980, creating a mid-decade peak in labor force growth. Labor force expansion opened the decade with a 2.9 percent annual rate of growth, peaked with a 4.8 percent annual rate from 1974 to 1977, and from that point to the present has grown at an annual rate of 2.4 percent. In the near future (1981-1982), we expect labor force growth to be about half of what it was during its peak period of growth and be near 6,500 persons per year.

A labor force growing substantially faster than population was associated with the rapid creation of jobs in particular industries, and a corresponding increase in participation rates. From 1974-1977, most job opportunities appeared in services, retailing, government, and construction. Since 1978, the services industry has continued to provide the greatest number of new jobs, with mining in second place, government in third place, and retailing fourth in the number of new jobs created. Filling these new jobs has been an increasing number of youth and females.

Some (14,15) have suggested that productivity has declined because the new labor force is comprised of an increasing number of inexperienced youth and females. But productivity is also a function of technological change and job design. Moreover, there are other characteristics of recent labor force entrants and the jobs they have taken that affect productivity. First, compared to new job holders ten years ago, new job holders since the middle seventies are more likely to have held their first job in an industry (i.e., services or government) where the measurement of productivity relies on more ambiguous indicators than in

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[1/] The civilian labor force is defined as the number of persons 16 years of age and older who are either employed or unemployed, excluding members of the Armed Forces.

County level labor force statistics, annual averages for 1978-1980, and for January and October of 1980 (the high and low months of total unemployment), are presented in Appendix IV.

goods-producing industries. Recent labor force entrants are also more educated, less likely to be the sole wage earner in a household, less likely to hold the same perception of the nature of work and its purposes, and more likely to register their disapproval of a job/ management by quitting than were new job entrants ten years ago. Other than the level of work experience then, there are several coincidental and competing reasons, including measurement problems, that may explain the decline in the rate of productivity growth.

Participation rates are a measure of the proportion of the population aged 16 and over who are in the labor force, and these rates have shown some dramatic changes over the past ten years. Participation rates for young males (aged 16-24) rose from 58.3 percent in 1970 to 84.4 percent in 1980 (Table 6). Female participation rates in this age group show a similar pattern of increase, rising from 43.5 percent to 72.7 percent over the decade. Since, in 1970, nearly all males between the ages of 25 and 64 were in the labor force, nearly all of the increase in male participation (from 72.6 percent to 84.0 percent in ten years) reflects the increase in youth participation in the labor force. Among females, on the other hand, participation rate increases have been as dramatic for the female aged 25-44 as they have been for younger males and females. Participation rates for those aged 25-44 rose from 38.2 to 65.9 percent, and females aged 45-64 increased their level of involvement in the labor force with a current 55.9 percent participation rate, compared to 40.3 percent ten years ago.

Had North Dakota maintained the population and age structure it had in 1970, but increased its participation rates to 1980 levels, the labor force would have increased to 292,000, fulfilling two-thirds of the state's new labor force requirements. In other words, gross population increases have not been the major source of new labor; rather, the increasing involvement in the labor force on the part of the population has supplied the bulk of new labor. The fact that increasing participation rates can be cited as the major source of labor supply over the past decade highlights the importance of assumptions made about future participation rates in forecasting labor supply (see, for example, 13). A review of the data in Table 6 suggests that, given a moderately strong economy and a near constant population over the short term, the largest untapped labor resource is most likely to be a male over the age of 65 or a female over the age of 25.

Already high labor force participation rates, a decline in the number of high school graduates, outmigration (discussed in Chapter III), and a slower rate of growth in jobs are all factors constraining near term labor force growth below 4.8 percent and, quite probably, below the 2.4 percent per annum rate of growth shown over the past three years.

Whether or not the slower anticipated rate of labor force growth can be construed as a forthcoming labor "shortage" is a judgment colored by one's relationship to the labor market. Certainly, from the standpoint of Williston and Dickinson employers, farmers who would willingly hire temporary farm/ranch labor, and hospitals attempting to hire nurses, a labor shortage already exists. But it is equally as certain that the state's unemployed do not view the labor market as being short of labor. However, what does seem to be a point of agreement is that there is a diminishing gap between the number of people in the population and the number of people in the labor market. It is also evident, based upon the fact that growth in the number of new young labor force entrants is declining, that the gap between the population and the labor force is narrowing.[2/]

A forecast indicating that there will be a discernible decrease in the rate of labor force growth has implications for labor market planning, labor turnover, and Job Service placement activity. With a tightening in the supply of labor, it is clear that forecasters who supply occupational demand estimates for vocational school programs need to improve the accuracy of their predictions. Moreover, employers may also have to begin to plan the redesign of jobs, tailor jobs and new technologies for the types of employees most frequently available, encourage employee loyalty, and reduce turnover in order to avoid a labor gap in their establishments and communities. With substantially higher interest costs limiting the introduction of technologies that would eliminate jobs, it appears that

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[2/] For example, applying the 1970-1980 population outmigration rates (from Table 4) and 1980 participation rates (from Table 6) to forecasts (6) of the number of high school graduates indicates that from 1980 to 1986 the number of high school graduates entering the labor force will drop from 5,790 to 4,050, or by 30.1 percent in six years. With participation rates remaining constant, outmigration would have to drop from 33 percent to 4.3 percent in order to have the number of high school graduates entering the labor market in 1986 equal the number entering in 1980. However, assuming an intensified recruiting effort by colleges and the military, a reduction in outmigration seems unlikely.

the educational and social mechanisms allocating skills to people and people to job openings will be more critical to an expanding economy in the near future than they were during the mid and late '70s. Because labor is becoming an increasingly scarce commodity, information about the labor market will become increasingly critical in both public and private decision-making processes.

Table 6
North Dakota Civilian Population and Labor Force Estimates By Sex and Age--1980

					LABOR FORCE																	
	Population				Participation Rates						Employment						Unemployment					
	Total		Male	Female	Total		Male		Female		Total		Male		Female		Total		Male		Female	
Age	N	%			N	Row %	N	Row %	N	Row %	N	%	N	%	N	%	N	Row %	N	Row %	N	Row %
16-24	116,100	24.3	56,500	59,600	91,000	78.4	47,700	84.4	43,300	72.7	82,800	26.3	43,000	22.9	39,800	31.3	8,200	9.0	4,700	9.9	3,500	8.1
25-44	157,600	32.9	78,700	78,900	129,100	81.9	77,100	98.0	52,000	65.9	124,000	39.4	74,600	39.8	49,400	38.8	5,100	4.0	2,500	3.2	2,600	5.0
45-64	124,200	26.0	62,000	62,200	95,200	76.7	60,400	97.4	34,800	55.9	91,900	29.2	58,200	31.0	33,700	26.5	3,300	3.5	2,200	3.6	1,100	3.2
65≥	80,500	16.8	37,900	42,600	16,700	20.7	12,300	32.5	4,400	10.3	16,100	5.1	11,800	6.3	4,300	3.4	600	3.5	500	4.1	100	2.3
TOTAL	478,400	100.0	235,100	243,300	332,000	69.4	197,500	84.0	134,500	55.3	314,800	100.0	187,600	100.0	127,200	100.0	17,200	5.2	9,900	5.0	7,300	5.4

V. ECONOMIC OVERVIEW AND EMPLOYMENT FORECASTS

A. Introduction

The purpose of this chapter is to provide an overview of North Dakota's economy and provide a near term (1981-1982) employment forecast. The chapter is divided into three basic areas: a description of the state's economy, employment and employment-related income, and forecasts of employment by major industry.

Current employment data, because it is based either on a sample of employers or on a sample of households, is nearly always published in preliminary form and then revised as more complete information becomes available. The data found in this chapter's tables may differ in minor ways from data found in earlier publications. Moreover, because current preliminary Job Service data is a basic component in the data series published under the auspices of the Bureau of Economic Analysis (BEA) and the Bureau of Labor Statistics (BLS), these data series are also continually undergoing revision.

B. The State's Economy

Gross State Product (GSP) represents one method of quantifying the relative importance of different industrial sectors in North Dakota's economy. GSP refers to the monetary value resulting from gross sales, less the cost of materials.(16:3) The calculation of GSP is an attempt to estimate money income after deductions for expenses on an industry-by-industry basis. This money income, or the actual dollars received, has been further modified (Table 7) to show real or inflation adjusted constant dollars.

A comparison of GSP for the 1963-1965 period with the most recent three-year period (1976-1978) indicates that there has been some change in the rank order of the sources of "value added" among the state's industries and that over ten years, there has been some leveling among industries in their relative contributions to total GSP. In terms of rank order, agriculture and government have retained their first and second positions. However, during the 1976-1978 period, finance, insurance, and real estate (FIRE) ranked third; transportation, communications, and public utilities (TCPU) stood at fourth place; and retail trade held fifth place. In contrast, retail trade held third place during the 1963-1965 period, followed by TCPU and services. Changes in the relative importance of industrial sectors for GSP are often associated with different rates of economic growth between sectors. The added value of finance, insurance, and real estate, for example, rose by 82 percent over the 10-year comparison period while retailing increased by only 32.6 percent in real dollars. However, rapid economic growth does not necessarily mean that an industry's rank order has changed. One of the fastest growing industrial sectors, manufacturing, grew by 166.3 percent but still retained its rank of ninth during the two periods. Because industries have grown at different rates, the major contributors to GSP (agriculture and government) have assumed less relative importance to the total. Other industries (in particular, transportation, communications, and public utilities; and finance, insurance, and real estate) have come to play a greater role in total GSP.

Data for GSP is available only through 1978. However, the available value added data, when interpreted within the context of population and employment data, reveals an outline of recent inter-industry trends and relationships. First, rapid GSP growth since 1975 in construction and FIRE have their counterparts and parallels in employment growth in special trades construction, housing starts (Chapter III, Table 3; and Chapter V, Part E), and demographic change (Chapter III). These components form an economic/demographic cluster that is distinct but not isolated from the remainder of the economy. Secondly, transportation, communications, and public utilities (TCPU) through 1978 have seen rapid growth in response to a variety of factors. Among the most important of these growth factors would appear to be the increased exports of agricultural raw materials and the exports of processed and unprocessed coal and oil. The import of construction materials, agricultural inputs (i.e., fertilizer), and consumer goods, associated with an older population, is also suggested as a reason for the rapid growth in TCPU. Finally, a comparison of GSP for the two periods (1963-1965/1976-1978) indicates that although North Dakota's manufacturing industry has grown substantially, North Dakotans still import the vast majority of the finished goods used in everyday life.

Table 7: Real North Dakota Gross State Product, 1963-1978(15)
1972

Sector	1963[1]	1964[1]	1965[1]	1966[1]	1967[1]	1968[1]	1969[1]	1970[1]
Agriculture	$ 430.9	$ 395.2	$ 557.8	$ 471.5	$ 457.6	$ 450.4	$ 545.2	$ 432.0
Agricultural Services	7.9	6.9	6.5	6.5	6.5	6.2	7.2	7.1
Coal Mining	2.9	3.2	3.3	4.2	3.7	4.0	4.2	5.0
Petroleum-Gas Mining	57.7	59.4	60.9	63.7	52.3	51.8	46.6	45.4
Other Mining	8.8	9.3	9.3	11.2	10.7	10.5	8.2	6.9
Construction	172.2	217.1	196.5	162.0	150.0	140.6	130.7	156.1
Manufacturing	76.2	75.2	101.4	103.3	110.1	137.4	230.4	165.0
Transportation	95.1	94.1	101.7	107.7	105.4	101.5	98.4	98.6
Communications & Public Utilities	91.5	92.1	103.9	112.9	121.2	130.7	137.8	140.6
Wholesale Trade	140.9	147.7	166.9	171.2	176.9	181.2	180.6	189.5
Retail Trade	280.8	284.1	283.9	301.2	292.4	298.2	296.4	297.5
Finance, Insurance, Real Estate	229.1	232.9	253.1	255.2	262.7	255.3	254.4	262.0
Business Services	48.6	50.5	54.1	57.4	56.7	59.0	62.2	62.0
Professional Services	163.1	165.0	164.9	173.1	173.7	169.6	186.6	176.4
Government	408.8	429.3	457.3	466.5	507.9	495.5	496.6	503.8
GROSS STATE PRODUCT	$2,214.4	$2,261.9	$2,521.5	$2,467.7	$2,487.7	$2,491.9	$2,685.5	$2,547.9

Sector	1971[1]	1972[1]	1973[1]	1974[1]	1975[1]	1976[1]	1977[1]	1978[2]
Agriculture	$ 587.7	$ 698.1	$1,025.7	$ 438.9	$ 731.8	$ 578.3	$ 456.7	$ 757.2
Agricultural Services	6.9	6.5	7.4	7.3	8.2	10.7	12.1	10.9
Coal Mining[1]	5.4	7.6	7.9	8.6	9.8	12.7	14.1	16.8
Petroleum-Gas Mining[1]	44.7	41.5	40.3	39.7	40.4	43.5	46.1	49.7
Other Mining[1]	6.7	6.1	6.2	5.6	5.0	5.1	6.0	3.7
Construction	163.8	177.5	153.3	163.3	186.6	225.9	225.1	256.0
Manufacturing	158.4	164.6	256.9	227.5	201.7	230.5	217.4	225.7
Transportation	99.4	107.0	121.8	122.8	127.6	130.8	138.9	139.1
Communications & Public Utilities[1]	147.4	152.9	157.3	176.0	215.3	234.1	237.7	257.9
Wholesale Trade	203.2	226.3	265.4	254.5	305.0	324.6	317.8	340.1
Retail Trade	306.3	316.0	341.0	355.8	337.9	368.9	378.3	377.7
Finance, Insurance, Real Estate	272.7	279.8	294.0	312.3	364.7	393.7	442.7	466.2
Business Services	61.9	66.2	76.5	78.5	76.1	90.4	85.2	93.0
Professional Services	173.1	186.6	195.8	193.7	210.4	215.0	248.1	250.8
Government	505.1	518.3	520.4	509.9	544.7	528.8	528.2	542.2
GROSS STATE PRODUCT	$2,742.6	$2,955.0	$3,470.0	$2,894.3	$3,365.2	$3,393.0	$3,354.3	$3,756.8

[1] Revised.

[2] Preliminary.

Estimates of GSP for 1979 and 1980 are not currently available. However, much of the remainder of this volume, and especially the appendices, offers information on significant components of GSP for 1979, 1980, and forecasts for 1981-1982. It is evident, for example, that due to high interest rates, the construction/FIRE GSP, housing starts and special trades construction employment cluster mentioned above, has slowed in its rate of growth since 1978 even though demographics inferred demand has remained high.

The economic dynamics of this particular cluster is fueled by consumer mortgage credit. Mortgage credit, at least during the early part of this decade, is expected to remain tight. As a consequence, this value added/employment cluster appears to be unlikely to build to the total real dollar strength that it demonstrated from 1976-1978 until 1982-1983 at the earliest. On the other hand, TCPU, interacting with forecasts of an increasing agricultural/energy export market, seems most likely to show strong advances in real value added dollars.

Forecasting GSP (or one of its components; i.e., gross sales) for a particular industry is not equivalent to forecasting employment or earnings. Industries vary in their degree of labor intensity[1/] and in the extent to which technological innovation can be expected to affect future demand on employment. Labor intensity is almost twice as great in the construction industry as it is in mining and even were the two industries expected to grow at the same rate, the effects on employment, the personal income of North Dakotans, and the occupational structure[2/] of the state's labor force, would differ substantially.

[1/] Labor intensity is defined as the ratio of wages to value added. Based on the data for nominal GSP (16:3) in 1978 and the wage and salary data in Appendix Table IIa, the labor intensity index is calculated as follows: FIRE, .17; TCPU, .43; mining, .38; wholesale trade, .49; retail trade, .52; services, .56; manufacturing, .57; and construction, .66.

[2/] For a detailed description of the occupational structure of the state's industries, see the list of publications in References-II.

C. Employment and Earnings

1. Introduction

The concept of labor intensity treats total wages as a "cost" of business. The cost of labor, like any other input, is subtracted from an industry's gross receipts which then leaves an industry's total value added. While total wages might be viewed as one industry's cost or a reduction in "growth," wages when viewed by the employed become earnings. Earnings that are saved or spent, in turn, become the gross sales and capital of other industries. This section focuses on a description of recent estimates of the number of people employed, the number of jobs held, and the amount of earnings related to those jobs. Our interest for the moment is in wage and salary employment; agriculture and farm income are described in Section E.

Counts of the number of jobs held and the earnings related to those jobs are made available through the job insurance recordkeeping system administered by Job Service North Dakota. The self-employed, military, domestic, hired farm, and church labor, for the most part, are not covered under North Dakota's job insurance system. A copy of the employer contribution and wage report is presented in Appendix II as Figure IIa. More than 20,000 reports are received each quarter from establishments having employment in the state. Statistics derived from these reports are provided in Appendix II. Counts of jobs by industry and county for 1978 and 1979 are found in Appendix Tables IIe and IIf with earnings relating to these jobs provided in Tables IIb, IIc and IId (by county). Job insurance covered work is reported by employers according to the county of worker's residence. Jobs in which workers change residence during the quarter (e.g., in the construction industry and among sales and service occupations in various industries), nonresidents, and circumstances in which the residence is unknown or uncertain, are reported as workers having a multicounty residence (as in Table 9). Wage report information on gross wages paid are the source used by the Commerce Department's Bureau of Economic Analysis (BEA) in calculating such consumption potential measures as spendable weekly earnings and disposable income. Wage information from employer reports is also a major component in BEA's calculation of personal income, per capita personal income, and Gross National Product.

2. Employment

The total number of people employed on an annual average basis increased at a rate of 4.3 percent between 1974 and 1977. The data in Table 8 shows that the rate of growth in the number of people with jobs decreased to 3.7 percent for the 1977-1978 period; to 2.8 percent for the 1978-1979 period; and with the recession/drought of 1980, the rate of growth declined to 0.4 percent in the number of people employed. Estimates of the annual average number of people employed rarely equals the number of jobs held. For example, from 1977 to 1978, the number of jobs held (Total Nonagricultural Wage and Salary in Table 8) increased from 221,090 to 234,010, or by 12,920 jobs. The number of people employed, however, increased by 10,830. A major reason for the difference between the increase in the number of people employed and the number of jobs held lies in the amount of dual job holding. An individual may work two jobs on a part-time basis, or be employed full-time during the week in retailing and work part-time during the weekend in the services industry. The "conceptual difference" in Table 8 represents a statistical method for distilling very accurate counts of the number of jobs worked, to an estimate of the number of people working those jobs.

According to the Bureau of Labor Statistics, "An estimated one of every 20 employed workers held two jobs or more in May 1978."(17:59) Although direct evidence on dual or multiple job holding specifically for North Dakota is rare, it appears that dual job holding is more prevalent in rural than urban states. Dual job holding tends to be associated with agriculture. In North Dakota, slightly more than 1 in 3 farm operators (see Table 14) reported off-farm employment for at least some period of time during 1978.(18) Dual job holding is also associated with self-employment, i.e., where an individual works for wages to support the family income of a small business. The United States Department of Agriculture reported that in 1975 ". . . 9.8 percent of

Table 8: North Dakota Annual Average Labor Force 1977-1980 By Industry

					% CHANGE		
	1977	1978	1979	1980	77-78	78-79	79-80
TOTAL CIVILIAN LABOR FORCE	309,600	317,240	325,210	329,700	2.5	2.5	1.4
Total Unemployment	16,880	13,690	13,060	16,360	-18.9	- 4.6	25.3
Rate of Unemployment	5.5	4.3	4.0	5.0	N/A	N/A	N/A
Total Employment	292,720	303,550	312,150	313,340	3.7	2.8	0.4
Total Agric. Employment	56,750	54,270	52,450	52,680	- 4.4	- 3.4	0.4
Agric. Self-Employed & Unpaid Family	46,330	44,130	42,520	42,860	- 4.7	- 3.6	0.8
Agric. Wage & Salary	10,420	10,140	9,930	9,820	- 2.7	- 2.1	- 1.1
Total Nonag. Employment	235,970	249,280	259,700	260,660	5.6	4.2	0.4
Nonag., Self-Employed & Unpaid Family	32,900	34,320	35,030	34,610	4.3	2.1	- 1.2
Adjusted Wage & Salary	203,070	214,960	224,670	226,050	5.9	4.5	0.6
Conceptual Difference[1/]	-18,020	-19,050	-19,520	-19,550	N/A	N/A	N/A
Total Nonag. Wage & Salary	221,090	234,010	244,190	245,600	5.8	4.4	0.6
Mining	3,060	4,250	5,720	8,010	38.9	34.6	40.0
Construction	16,450	18,500	18,670	16,240	12.5	0.9	-13.0
Manufacturing	15,300	15,730	16,650	15,500	2.8	5.8	- 6.9
Trans., Comm. & Public Utilities	13,760	14,830	16,130	16,860	7.8	8.8	4.5
Wholesale Trade	18,750	20,080	21,320	20,470	7.1	6.2	- 4.0
Retail Trade	43,550	44,650	46,280	46,900	2.5	3.7	1.3
Finance, Insurance & Real Estate	9,880	10,480	11,010	11,420	6.1	5.1	3.7
Services	42,810	45,530	47,820	49,250	6.4	5.0	3.0
Government	57,530	59,960	60,590	60,950	4.2	1.1	0.6

[1/] Conceptual difference: Total nonagricultural wage and salary employment refers to jobs. Some of these jobs are held by dual job holders. The conceptual difference is an adjustment which converts the number of jobs to the number of people holding these jobs and results in adjusted wage and salary employment.

the nonmetro (counties oustide SMSAs) labor force had self-employment income from nonfarm activities, compared with 7.8 percent in metro areas."(19:6) Dual job holding is the major factor accounting for different rates of growth in jobs as compared to the number of people employed in those jobs. Moreover, the available evidence suggests that dual job holding is likely to be more prevalent in North Dakota than the estimate of 1 in 20 indicated by national statistics.

Current estimates and short-term forecasts of the number of people working and the number of jobs worked involve related but separate concepts. During 1981, we expect the number of individuals holding jobs to increase at a rate nearing 1 percent or slightly above the growth rate noted in Table 8 for 1979-1980. The rate of increase in the number of people working is forecast to grow at 2.5 to 3 percent during 1982. The number of jobs in wage and salary industries for 1981 and 1982 is expected to grow only slightly faster than in a one-to-one ratio to the total number of people employed. Opportunities for dual job holding, nonfarm temporary wage and salary jobs for farm operators, and for the owners of small businesses are expected to be more limited than during the late '70s.

Our review of employment statistics has focused on the rate of increase in jobs and people employed on a statewide or aggregate level. Data in the Appendix permits local area analysis. Pinpointing areas of job growth on a county by industry level leads to the observation that rural counties with energy development and urban counties experienced the greatest increase in jobs from 1978 to 1979. Table 9 presents summary statistics focusing on a comparison of rural and urban nonfarm job growth from 1978 to 1979. The data in Table 3 indicates that urban counties held 57.6 percent of the population (1980), but data in Table 9 indicates that these same counties had 64.9 percent (1979) of the covered employment. Moreover, the employment change data in Table 9 shows that while both rural and urban counties showed increases in the number of jobs above the 4 percent rate of growth, the numeric increase in urban counties was more than two times as great as it

Table 9

Urban and Rural Covered Wage and Salary Jobs, 1978 and 1979[1/]

	1978		1979		1978-1979 Ch.	
	N	%	N	%	N	%
Urban	138,097	64.7	144,152	64.9	6,055	4.4
Rural	66,261	31.0	69,091	31.1	2,830	4.3
Multi-County	9,197	4.3	8,862	4.0	-335	-3.6
Total	213,555	100.0	222,105	100.0	8,550	4.0

was in rural counties. More rapid urban than rural county job growth reflects the historical trend, and we expect this trend to be continuous through the mid-1980s.

Even though rural counties would appear to be more likely than urban counties to benefit from energy-related employment increases, urban counties (and thus, covered employment job statistics) would appear to benefit more in terms of where energy industry-related employees live. Industry data, for example, shows (between July 1, 1978, and July 1, 1980) that 60.9 percent of Mercer County power plant and mine site construction workers resided in urban rather than rural counties.(20:5) With this knowledge in mind, it becomes clear that personal income measures are likely to show substantial increases for urban counties (e.g., in the Bismarck SMSA, especially in Morton County) even though the actual job site may be in a rural county. It is also evident that power plant construction completions, slowdowns, and concomitant high mortgage interest rates are likely to be associated with substantially increased rates of unemployment in urban areas.

[1/] The urban/rural distinction is based on the counties listed in Footnote 4 in Chapter III.

3. Earnings and Income

Although jobs imply wages and employee income, there are obvious differences in wage levels between occupations and between industries. Average earnings per job in an industry also depend upon the number of hours worked and the rate of turnover among occupations. Not only are the number of jobs in an industry affected by the state of the economy, but the amount of work and work-related compensation are also a function of economic conditions. Moreover, succeeding sections and the Appendix tables make it evident that there are substantial seasonal factors in both employment and average earnings per job.

Table 10 displays summary data from Appendix Table IIc. In Table 10, industries are ranked by average monthly earnings per job with parallel information on the proportion of all covered jobs in each industry. At the extremes of the ranking, high average earnings per job tend to be associated with industries in which there are proportionately few jobs. Mining, construction, and TCPU in 1979 had the highest average earnings per job but had only 2.5, 8.3, and 5.6 percent, respectively, of all covered employment. Retail trade, services, and local government, on the other hand, ranked among the four industries with the lowest average earnings per job and were the largest employers of labor. Among industries in the intermediate range of earnings (ranks 4-8), there appears to be no association between average earnings per job and the number of jobs in an industry. Average earnings per job for all covered employment of $993 per month is substantially lower than the earnings in eight of twelve major industries because over half (50.6 percent) of the jobs in the state are confined to three industries with low average earnings.

Part of the reason for lower than average job earnings in retail trade, local government, and services stems from the part-time and temporary nature of many of the jobs in these industries. A second reason is that occupational staffing patterns reflect a different level of skill utilization. Occupational staffing pattern statistics (see Table 18, Chapter VI) show, for example, that 65.9 percent of the jobs in retailing and 62.2 percent of the

Table 10: Covered Employment Ranked by Average Monthly Earnings--1979

Rank	Industry	Average Monthly Earnings	Annual Average Employment N	Annual Average Employment %
1	Mining	$1,608	5,611	2.5
2	Construction	1,321	18,540	8.3
3	Transportation, Communication, and Public Utilities	1,315	12,606	5.6
4	Federal Government	1,259	9,617	4.3
5	Wholesale Trade	1,173	21,445	9.5
6	Manufacturing	1,086	16,632	7.4
7	State Government	976	14,016	6.2
8	Finance, Insurance, and Real Estate	974	10,571	4.7
9	Local Government	815	24,324	10.8
10	Agriculture	794	1,849	0.8
11	Services	732	43,428	19.3
12	Retail Trade	592	46,169	20.5
	Total Average All Industries	$ 933	224,808	100.0

jobs in services are clerical, service, or sales occupations--occupations that are typically paid at the lowest rate possible. In contrast, over 82 percent of all jobs in the highest average earnings industries of mining and construction are in maintenance and production occupations. Thus, although covered wage data (see Figure IIa) lacks information on wages paid in each occupation, staffing pattern data from other sources allows the inference to be made that part of the reason average earnings per job varies from industry to industry lies in the skill utilization requirements of each industry.

Other direct measures of job-related earnings, suitable for economic analysis, are available from monthly surveys of hours and earnings among production workers in manufacturing.[3] These estimates are occupationally specific insofar as the earnings of managers, owners, sales personnel, and clerical staff are excluded. Moreover, in contrast to covered earnings, these survey estimates measure earnings as a function of wages per hour and the actual number of hours worked. Statistics from the survey of manufacturers show that production workers had monthly average gross wages of $954.81 in 1978 and $1,013.22 in 1979. In 1979, average earnings per job in manufacturing were $1,086.24. This higher earnings measure from UI-covered wage data reflects both production and nonproduction worker earnings (in particular, owner and manager). The hours and earnings series in manufacturing, when aggregated with totals from other states, is a key economic indicator on a national level. Covered earnings, however, are often used in combination with other income measures to create estimates of economic well-being, consumer purchasing power, and the potential for higher savings volumes.

In the covered wage employer's report, each employee is counted once regardless of how many hours the employee works. A year-to-year increase in the number of part-time workers serves to decrease average earnings per job (total wages/total employment = average earnings per job). And this is precisely what happened to the Bureau of Labor Statistics' net spendable weekly earnings series. The spendable earnings series is one attempt to estimate and monitor consumer buying power (of families headed by a husband) based, in part, on covered earnings data. But in the late '60s, and through the '70s, with a rapid increase in the part-time employment of youth and females, average earnings per job declined.(22) Consequently, the spendable weekly earnings statistic began to give market analysts a lower, misleading picture of household consumption potential. Covered earnings are also an important component in a second measure of consumption potential, personal income, and per capita income (personal income estimates/population estimates = per capita personal income).[4/] Personal income is a labor and proprietors' (as distinct from corporate) income measure. Labor and proprietors' income data are found in Table 11 (a reconstruction of BEA's most recent personal income release with percent distributions added to facilitate interpretation) and are listed as income by type or by industry. Additional income includes such nonlabor income as transfer payments (payments made under social security, AFDC, job insurance, Medicare and Medicaid) and dividends, interest, and rent paid to persons. Deducted from this income total are personal contributions for social insurance.

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[3] These statistics are published monthly in Job Service's Prairie Employer Review.

In 1979, labor and proprietors income in North Dakota accounted for 66.8 percent of all personal income (Appendix Table IIe contains 1974-1979 estimates of personal income for North Dakota). This contrasts with national estimates which show that 72.9 percent of all personal income in the United States was derived from proprietors and labor income. The data in Table 11 indicates that in 1979, 20.7 percent of North Dakota's personal

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[4/] "Personal income is the income of residents of an area from all sources. It is measured after deduction of personal contributions to old age and survivor's insurance, government retirement, and other social insurance programs . . . It includes income received from business, governments . . . households and institutions. It consists of wages and salaries . . . various types of supplementary earnings termed 'other labor income' (the largest item being employer contributions to private pension, welfare, and workmen's compensation funds), proprietors income . . . rental income of persons, dividends, personal interest income, and government . . . (i.e., social security) . . . and business transfer payments . . ."(23:vi)

Table 11: Personal Income by Major Sources 1979 (Thousands of Dollars)

	Item	United States		North Dakota	
	Total Labor and Proprietors Income by Place of Work[1]	$	%	$	%
	By Type				
	Wage and Salary Disbursements	1,234,660,000	83.1	2,912,806	78.5
	Other Labor Income[2]	122,682,000	8.3	223,107	6.0
	Proprietors Income[2]	127,499,000	8.6	575,873	15.5
	Farm	28,180,000	1.9	253,066	6.8
	Nonfarm[2]	99,319,000	6.7	322,807	8.7
	By Industry				
	Private	1,247,652,000	84.0	2,947,104	79.4
	Farm	37,394,000	2.5	337,043	9.1
	Ag. Serv., For., Fish., and Other[3]	6,214,000	0.4	15,962	0.4
	Mining	24,573,000	1.7	132,836	3.6
	Construction	90,788,000	6.1	365,648	9.8
	Manufacturing	387,670,000	26.1	251,926	6.8
	Transportation, Communication, and Public Utilities	114,662,000	7.7	348,241	9.4
	Wholesale Trade	99,051,000	6.7	357,307	9.6
	Retail Trade	147,335,000	9.9	408,496	11.0
	Finance, Insurance, and Real Estate	86,326,000	5.8	181,002	4.9
	Services	253,639,000	17.1	548,643	14.8
	Government and Government Enterprises	237,189,000	16.0	764,682	20.6
	Federal, Civilian	56,431,000	3.8	154,874	4.2
	Federal, Military	20,909,000	1.4	154,495	4.2
	State and Local	159,849,000	10.8	455,313	12.2
	Derivation of Personal Income by Place of Residence				
	Total Labor and Proprietors Income by Place of Work	1,484,841,000	100.0	3,711,786	100.0
	Less: Personal Contributions for Social Insurance by Place of Work	-80,204,000		-216,122	
	Net Labor and Proprietors Income by Place of Work	1,404,637,000		3,495,664	
	Plus: Residence Adjustment[4]	-412,000		-123,423	
	Net Labor and Proprietors Income by Place of Residence	1,404,225,000	72.9	3,372,241	66.8
Other	Plus: Dividends, Interest, and Rent[5]	271,760,000	14.1	1,046,426	20.7
Income	Plus: Transfer Payments	251,020,000	13.0	628,650	12.5
	Personal Income by Place of Residence	1,927,005,000	100.0	5,047,317	100.0
	Per Capita Personal Income (Dollars)	8,727		7,683	
	Total Population (Thousands)	220,062.4		656.9	

[1] Consists of wage and salary disbursements, other labor income, and proprietors income.

[2] Wages and salaries based upon data furnished by individual state bureaus of employment security.

[3] Includes wages and salaries of U.S. residents working for international organizations in the U.S.

[4] Adjustment for border workers: Income of U.S. residents working across U.S. borders less income of foreign residents working in the U.S.

[5] Includes the capital consumption adjustment for rental income of persons.

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income, in comparison to 14.1 percent of the nation's, was derived from dividends, interest, and rent.

A comparison of industry specific sources of labor and proprietors income reveals other contrasts between North Dakota and the nation. The income estimates, for example, show that a greater proportion of national, as compared to North Dakota, personal income is located in manufacturing, FIRE, and services industries. On the other hand (in North Dakota), farming, mining, construction, TCPU, and trade play a greater role in personal income than in the national economy.

Personal income per person in North Dakota, at $7,683 in 1979, is 12.3 percent below national per capita income. Per capita income, however, tells us little about how evenly personal income is distributed.[5/] Even so, higher per capita income is one inducement for certain types of industries to consider locating in a given area.

Current forecasts of the rate of growth in labor and proprietors income suggests that the per capita income gap between the state and the nation may widen. BEA, basing its analysis on historical trends, indicates that labor and proprietors income for North Dakota is likely to grow at a 3.1 percent annual rate (in 1972 real dollars), but at the national level it is expected to grow at a 3.3 percent annual rate from 1978 to the year 2000.(25) However, with the energy crisis there is some question over the extent to which the historical relationships serving as the basis for BEA's projections are still valid for either North Dakota or the nation.

A major component of labor and proprietors income, and therefore personal income, is covered nonfarm earnings. For example, covered earnings in construction amounted to 80.4 percent of personal income attributable to that industry, and 86.1 percent of

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[5/] How evenly, as well as how much, income is distributed among consumers or households is an important factor in the pattern of consumption. The proportion of income devoted to durable and nondurable consumer goods, to essential and nonessential purchases, as well as the proportion of income saved and invested, is a function of demographics and consumer attitudes interacting within the context of the amount (i.e., total personal income) of income and its distribution. (See 24 for analytical tables on consumer expenditure patterns as a function of income levels.)

personal income in manufacturing (1979 data). Because of their relative importance in the calculation of personal income, and their accuracy and reliability in comparison to other measures contributing to personal income, BEA analysts have used these statistics to compare the sensitivity of state economies to the national business cycle. Their analysis shows that during the recession of 1974-75 and the recovery of 1976-79 in the Plains States and North Dakota, " . . . swings . . . (in nonfarm payrolls) . . . were uniformly small because fluctuations in agricultural production, which substantially affected nonfarm payrolls in the region were relatively independent of the national business cycle."(5:24) In other words, historically, nonfarm payrolls in North Dakota neither suffered as greatly during recession, nor expanded as rapidly during recovery in comparison to the nation as a whole.

Although national data for 1980 are presently not available, the majority of nonfarm payroll information (covered earnings) for North Dakota are available in preliminary form. Covered earnings data for 1978-1980 are presented in Table 12. Total pre-tax gross earnings of labor demonstrated real growth (growth faster than inflation) from 1978 to 1979. Covered earnings for this period rose from 2.2 to 2.5 billion dollars, or by 13.4 percent, faster than the rate of inflation at 11.3 percent. However, during the drought/recession of 1980 the rate of growth in total covered earnings declined to 9.7 percent, below the 13.5 percent rate of inflation, registering a negative rate of real income growth. Job insurance benefits, by rising 54.9 percent from 1979 to 1980, created an offset to the decline in consumer purchasing power. However, benefits paid during 1980 of 37.2 million dollars represented only a minor fraction (1.3 percent) in comparison to $2.76 billion in covered earnings.

Among specific industry groupings, mining, TCPU, and FIRE showed an earnings growth that ran strongly against the economic downturn. These three industries had payrolls that rose over the previous year's rate of growth, and rose faster than the rate of inflation. All other industries declined in their rate of earnings growth; or where they rose, failed to add earnings to the

Table 12: Job Insurance Covered Earnings
1978-1980 (Preliminary)[1]

	Thousands of Dollars			Percent Change	
	1978	1979	1980	1978-1979	1979-1980
Mining	73,811	108,274	169,533	46.7	56.6
Construction	275,607	293,909	281,913	6.6	-4.1
Manufacturing	190,800	216,803	222,508	13.6	2.6
TCPU	168,219	198,903	235,999	18.2	18.7
Wholesale Trade	255,364	302,072	314,734	18.3	4.2
Retail Trade	292,227	327,766	347,372	12.2	6.0
FIRE	109,692	123,498	141,178	12.6	14.3
Services	328,688	381,620	434,582	16.1	13.9
Agriculture	15,402	17,635	19,386	14.5	9.9
Total Government	511,226	547,090	595,186	7.0	8.8
Federal Government	139,825	145,247	158,774	3.9	9.3
State Government	149,382	163,977	178,302	9.8	8.7
Local Government	222,019	237,866	258,110	7.1	8.5
Total	2,221,036	2,517,570	2,762,390	13.4	9.7
Inflation Rate--CPI	195.4	217.4	246.8	11.3	13.5
Job Insurance Benefits Paid	21,990	23,981	37,153	9.1	54.9

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[1] Excludes military and railroad earnings.

economy above the rate of inflation. Those industries that declined over the previous year and dropped well below the rate of inflation were: construction, manufacturing, wholesale trade, retail trade, and state government. Prior to the drought/recession (1979), these industries were responsible for 48.9 percent of wage and salary jobs. Federal and local government, and services, added some earnings stability to the state's economy. Earnings in federal government (due primarily to the earnings paid to census workers) and in local government, although not rising as fast as inflation, increased in their rate of growth during 1979-80 in comparison to 1978-79. Services declined in its rate of earnings growth during the drought/recession, but the 13.9 percent payroll increase from 1979 to 1980 was slightly above the 13.5 percent rate of inflation, and added real income strength to North Dakota household consumption potential. In summary, payroll earnings of industries with nearly half of the state's wage and salary jobs decreased in the rate of payroll growth to a point below the rate of inflation or, in the case of construction, declined in total covered earnings paid. In contrast to North Dakota's previous experience with recession and the economic distinctions between the United States and North Dakota (Table 11), the drought in agriculture appears to have brought North Dakota's current economic experience with recession more into line with the national business cycle.

D. Summary

There are several sources of data and methods of approach to the analysis of North Dakota's economy. The most comprehensive measure of economic activity, Gross State Product, represents an aggregate summary outcome of the economy's interacting components. Within the total economic system are the major components of employment, earnings related to employment, and total personal income. Employment, earnings, and personal income are related but distinct dimensions within the same system. Major industry groups vary in their degree of labor intensity, differ in their occupational structure, and in the proportion of total wages and salaries they distribute and feed back into the local economy. With employment and proprietors earnings comprising only 66.8 percent of personal income in the state, as compared to 72.9 percent at the national level, it is clear that minor fluctuations in employment are less likely to negatively affect the state's total economy to the extent that employment variation of the same relative magnitude affects national personal income. At the same time, the drought/recession of 1980 constrained the growth rate in employment and employment-related earnings to a point below the rate of inflation. This real earnings decline during 1980 acts as an impediment to local employment and earnings recovery during 1981-1982.

E. Employment by Industry

1. Agriculture

Annual average agricultural production employment (self-employed family farm and hired farm labor) has remained at a near constant between 1970 and 1980. The number of persons employed in agriculture in 1980 was 52,680, representing a 1.5 percent increase over 51,920 in 1970. But because nonagricultural wage and salary employment has grown much faster than agricultural employment, the number of people employed in this industry has declined from 22.8 percent of all people employed in 1970 to 16.8 percent in 1980.

Agriculture is the driving source of employment and personal income in the state, although as the statistics noted above and the preceding sections of this chapter suggest, the role of agriculture has diminished somewhat as other industries have expanded. One method of emphasizing the role of agriculture in the state's economy is to point out that gross farm income from all sources at $2.5 billion in 1978 was 13.8 percent higher than total covered earnings for that year. Another procedure shows that net farm income (income from the operation of the farm after deductions for expenses) per farm averaged $17,447, or 59.1 percent above average covered earnings per job in 1978. For the most part, an estimated 41,000 farms in the state represent a pool of small businesses (small when judged by national standards) whose major economic impact on the state stems not from direct employment, but rather from the loan, purchase, transportation, and property tax transactions generated in the process of doing business.

The "farm dollar" can logically be divided into two broad categories: production expenses, or expenditures made for the purpose of conducting farming as a business; and consumer expenditures, made from net farm income and for the purpose of maintaining home and family. The two types of expenditures affect different sectors of the economy(26) and are likely to be incurred in communities of different sizes(27).

Table 13 presents data on the major components of farm income and business expenditures for 1970 to 1979.[6] Farm production expenditures rose by 17.7 percent between 1977 and 1978, and rose again by 16.1 percent over the next year to $2.46 billion in 1979. Income from farm operations rose by 30.1 percent from 1977 to 1978 and by another 5.2 percent from 1978 to 1979. Over the recent past, farm expenditures have risen substantially and steadily while farm income has demonstrated its traditional erratic performance. The erratic nature of agriculture as a driving force in North Dakota's economy is shown by the fact that from 1970 to 1979 the percentage change in net farm income exceeded (-/+) 55 percent during six of those years. The dryness of the 1979/1980 winter, and the spring of 1980, led many farmers to forego normal production expenditures. With the drought of 1980 forcing premature cattle liquidations, abandoned grain fields, and ". . . (g)rain production drop(ping) 32 percent from last year . . ." higher grain prices still resulted in a 19 percent decrease in the value of the 1980 crop in comparison to the 1979 crop.(28) Despite the heavy role played by crop sales in net farm income, statistics for 1980 farm income are likely (due partly to high cattle sales volumes and grain carryover from 1978 and 1979) to show little change in net farm income from the low 1979 level.

Scenarios depicting the future of farm income emphasize potential forecast errors, or present a forecast for only a limited time span. USDA, for example, indicates that 1981 farm

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[6] These figures frequently undergo extensive revision because many of the transactions (i.e., between farmers) and variables (i.e., the imputed value of farm products consumed by the farm family) are estimated on the basis of current but fragmentary data. These data are refined every four years with data from the Census of Agriculture, or from the less geographically specific Farm Finance Survey, also conducted by the Census Bureau.

Table 13: North Dakota Farm Income, Production Expenses, and Net Farm Income 1970-1979
(Thousands of Dollars)

		A	B	C	D	E	F	G	H	I	J	K	L	M
		(C+B)		(D-I)										
					Income					Expenditures				
					Total	Cash Receipts		Other Income						
		Net Farm Income	Value of Crop and Livestock Inventory Change	Income Less Production Expenses (Realized Net Income)	Cash Receipts and Other Income	Crops	Livestock and Products	Government Payments	Imputed Income, Rent	Total Expenses	Feed, Livestock and Seed Purchased	Fertilizer	Wages Prerequisites and Social Security Tax	*Other Expenses
1970	$	244,792	- 60,298	305,090	1,069,568	504,218	323,814	167,239	74,297	764,478	116,654	31,677	38,285	577,862
	%				100.0	47.1	30.3	15.6	7.0	100.0	15.3	4.1	5.0	75.6
1971	$	360,639	+ 89,443	271,196	1,122,388	532,487	369,236	140,517	80,148	851,192	135,855	30,484	42,332	642,521
	%				99.9	47.4	32.9	12.5	7.1	100.0	15.9	3.6	5.0	75.5
1972	$	599,541	+ 5,394	594,147	1,515.071	766,914	453,493	208,122	86,542	920,924	160,817	30,974	41,500	687,633
	%				99.9	50.6	29.9	13.7	5.7	100.0	17.5	3.3	4.5	74.7
1973	$	1,499,049	+280,694	1,218,355	2,525,055	1,676,283	616,989	119,431	112,352	1,306,700	257,848	55,559	45,640	947,653
	%				100.0	66.4	24.4	4.7	4.5	100.0	19.7	4.3	3.5	72.5
1974	$	1,030,858	-225,047	12,555,905	2,652,436	1,978,025	513,906	30,968	129,537	1,396,531	201,453	99,006	56,336	1,039,736
	%				100.0	74.6	19.4	1.1	4.9	100.0	14.4	7.1	4.0	74.5
1975	$	721,249	+245,110	476,139	2,086,613	1,376,410	539,458	24,883	145,862	1,610,474	211,691	120,988	52,408	1,225,387
	%				100.0	66.0	25.8	1.2	7.0	100.0	13.1	7.5	3.3	76.1
1976	$	320,743	+ 46,966	273,747	1,957,620	1,199,909	578,260	22,744	156,707	1,683,873	237,987	128,490	67,121	1,250,275
	%				100.0	61.3	29.5	1.2	8.0	100.0	14.1	7.6	4.0	74.3
1977	$	116,671	-145,728	262,399	2,061,106	1,125,985	635,635	122,603	176,883	1,798,707	297,987	133,229	58,016	1,309,475
	%				100.0	54.6	30.8	6.0	8.6	100.0	16.6	7.4	3.2	72.8
1978	$	718,323	+137,594	580,729	2,698,635	1,511,428	709,106	278,179	199,922	2,117,906	315,545	148,933	76,123	1,577,305
	%				100.0	56.0	26.3	10.3	7.4	100.0	14.9	7.0	3.6	74.4
1979	$	254,835	-126,116	380,951	2,838,979	1,641,206	925,323	46,519	225,931	2,458,028	418,551	162,366	82,858	1,794,253
	%				100.0	57.8	32.6	1.6	8.0	100.0	17.0	6.6	3.4	73.0

Source: Bureau of Economic Analysis, NDSU/USDA(1,2)

* BEA does not present detailed data for Column M, "Other Production Expenses," NDSU/USDA, however, provides the following information on production expenses: For 1978, on $1,409,700,000 of other production expenses; Repair and Operation of Capital Items, 21.9 percent; Depreciation and Other Consumption of Farm Capital, 31.8 percent; Taxes on Farm Property, 5.4 percent; Interest on Farm Mortgage Debt, 5.9 percent; Net Rent to Nonfarm Landlords, 14.3 percent; and Miscellaneous, 20.7 percent.

P/ Preliminary(2)

income could rise between 17 and 33 percent.(29) The major potential for error in agricultural forecasts exists at the world market level since weather conditions are assumed to be normal (and thus supply conforms, within limits, to planted acreages and a known existing supply of livestock), and the inflation rate for major inputs such as seed and fertilizer can be forecast with a reasonable degree of accuracy. With the recession overseas and federal policy change toward Russian exports yet to show a strong influence, the market is temporarily depressed. Over the long term, however, world population and income increases are expected to result in a stronger market. Structurally, the forecast for the '80s includes the economic assumptions that both production expenditures and income will rise together in a roughly parallel track. With net farm income the result of the difference between income and expenditures (net farm income averaged 14 percent of gross or total income from 1977 to 1979), relatively minor short-term surges or lags in either expenditures or gross income will produce the major changes in net farm income, upwards of (+/-) 55 percent, that have come to characterize agriculture in North Dakota.

North Dakota's economy is largely dependent on the prosperity of approximately 41,000 relatively small agricultural enterprises. The erratic nature of farm income for several years has led the state to adapt to these circumstances by emphasizing the need for a diversified economy. The response of the farming community's labor force to wide swings in income has taken shape in the form of migration, increasing incidents of farm tenancy, and diversification of income sources through off-farm employment. Appendix Table IIf and Tables 14 and 15 provide the most current information on farm operator characteristics from the 1974 and 1978 Census of Agriculture and the proportion of land in crops, population density, and population change from 1960 to 1980.

From 1969 to 1974, the proportion of farm operators who were tenants declined from 14.4 percent to 13.4 percent.(30,31) However (as is shown in Table 14), by 1978, the proportion of tenants had grown to 17.2 percent of all farm operators. The increasing incidence of farm tenancy (and part ownership) may be related to

Table 14: North Dakota Farm and Operator Characteristics by Sales Class(18)

	Farms ≥ $1,000 in Sales					Farms ≥ $2,500 in Sales				
	1974		1978		% Ch.	1974		1978		% Ch.
	N	%	N	%		N	%	N	%	
Total Farms/Operators	42,710	100.0	41,172	100.0	- 3.6	40.661	100.0	38,893	100.0	- 4.3
Farm Size (acres)										
>10	981	2.3	1,229	3.0	25.3	543	1.3	759	2.0	39.8
10-49	773	1.8	1,040	2.5	34.5	332	0.8	442	1.1	33.1
50-179	3,441	8.0	3,755	9.1	10.1	2,731	6.7	2,939	7.6	7.6
180-499	9,175	21.5	7,902	19.2	-13.9	8,819	21.7	7,611	19.6	-13.7
500-999	13,249	31.0	11,906	28.9	-10.1	13,169	32.4	11,843	30.4	-10.1
1,000-1,999	11,332	26.5	11,267	27.4	- 0.6	11,298	27.8	11,252	28.9	- 0.4
≥2,000	3,789	8.9	4,073	9.9	7.5	3,769	9.3	4,047	10.4	7.4
Farm Size (summary)										
≤179	5,165	12.1	6,024	14.6	16.6	3,606	8.8	4,140	10.7	14.8
180-999	22,424	52.5	19,808	48.1	-11.7	21,988	54.1	19,454	50.0	-11.5
≥1,000	15,121	35.4	15,340	37.3	1.4	15,067	37.1	15,299	39.3	1.5
Operator Characteristics										
Full Owner	16,820	39.4	14,245	34.6	-15.3	15,306	37.6	12,720	32.7	-16.9
Part Owner	20,156	47.2	19,830	48.2	- 1.6	19,956	49.1	19,581	50.3	- 1.9
Tenant	5,734	13.4	7,097	17.2	23.8	5,399	13.3	6,592	17.0	22.1
Operator Off-Farm Work Days										
None	32,142	75.3	25,379	61.6	-21.0	31,169	76.7	24,704	63.5	-20.7
Subtotal	10,568	24.7	15,793	38.4	49.4	9,492	23.2	14,189	36.5	49.5
≤99 Days	4,826	11.3	7,329	17.8	51.9	4,606	11.3	7,047	18.1	53.0
≥100 Days	5,742	13.4	8,464	20.6	47.4	4,886	12.0	7,142	18.4	46.2

the proportion of farm operators during the '70s who were reaching retirement age and the rapidly increasing value of farm land and buildings. In 1969, 36.5 percent of all farm operators were age 55 and over; by 1974, 40.6 percent of the state's farmers were approaching the traditional retirement era. Age structure data from the 1978 Census of Agriculture are unavailable. However, simple computation shows that those age 55 in 1974 would, in 1980, be age 61 (the youngest of those 12.8 percent who were aged 65+ in 1974 would be 71). During the mid-70s then, due simply to the age structure among the state's farmers, there emerged an increasing pressure to sell or transfer farm land. During the same time, however, the rapidly increasing sale price of farm land meant that the number of potentially new owners of land was becoming increasingly limited. In a national study, the magnitude of the increase in the value of farm land, buildings, and machinery is given meaning through relating the value of assets to farm income. "In the seven years during 1972-78, the value of U.S. farm assets more than doubled . . . . This increase of over $400 billion for these seven years was nearly three times the total farm earnings in the same period and equivalent to the total of farm income for the whole farm population during 1934-71."(32:27) Farm tenancy, especially when intergenerational arrangements are involved, represents one adaption to the problem of increasing farm land costs. Like part ownership, which is also on the rise, intergenerational farm tenancy represents a technique of dispersing operating costs (as well as benefits).

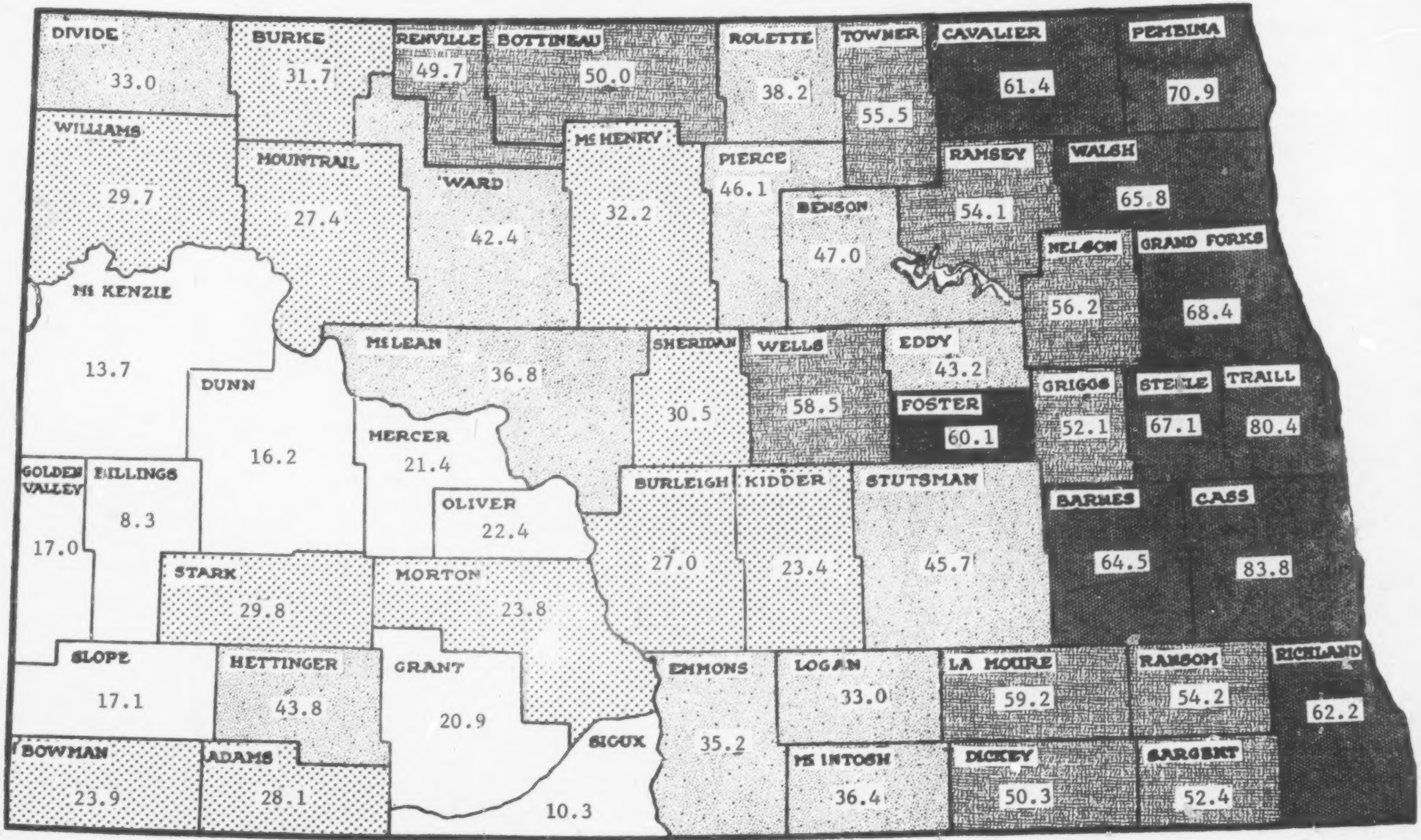
In the midst of the historically novel shift towards farm tenancy is the continued decrease in the number of farms. The ultimate adaption to large swings and low net farm income is to cease farming. Between 1974 and 1978, the number of farms of 180 to 1,999 acres decreased by 2,681 farms; 97.6 percent of that decrease was in the 180 to 999 acre class. At the same time, the number of farms of 2,000 acres or more increased by 284. Medium-size farms, the majority (52.5 percent) of all farms in 1974 (see Table 14) decreased by 11.7 percent in four years. By 1978, however, the number of large farms had grown by 1.4 percent, while the number of small farms had grown by 16.6 percent. However, only 42.5 percent of the farms in the 10 to 49 acre size class had farm sales of $2,500 or more. This low income level during 1978, when net farm income reached $718 million (Table 13), suggests that most of the small farm growth has not been in farms established, nor intended to be, the main source of family income.

From the standpoint of acreage (180+ acres) and sales ($2,500 or more), as a measure of consumption or purchase potential, it may be more appropriate to think of farms in a more restricted sense. Applying the above definition to 1974 and 1978 statistics in Table 14 indicates what might be thought of as the traditional farm decreased in number from 37,055 to 34,753, or by 6.2 percent in four years.

County level statistics in Tables 15 and Appendix Table IIf permit local area analysis of declining farm numbers as a regional adaption to swings in net farm income. The data in Table 15 and Figure IV provide an indication of the kind of agricultural practices followed in each county (crop acreage versus ranching and fallow). A knowledge of the particular kind of agriculture emphasized in each county provides an indication of the areas of the state most likely to be affected by changes in livestock and grain prices.

Population density in many respects is coincidental with the proportion of land devoted to crops. Population density is also often a good indicator of the extent to which the farm population has an opportunity to use a third method, off-farm employment, of adapting to wide swings in net farm income. Census of Agriculture data shows that between 1974 and 1978 there was a 49.4 percent increase in the number of farm operators working at least some time off the farm. In 1978, 38.4 percent (or 15,793) farm operators worked for at least some time at off-farm labor. Moreover, as is illustrated in Appendix V, farm operators who reside in SMSAs and other urbanized counties (Appendix Table IIf) were more

Figure IV: Percent of Land Planted to Crops[1]



[1] Crops: wheat, barley, oats, corn, sunflower, flax, potatoes, beans and beets. 1979 P/

60.1-83.8%	49.9-59.2%	33.0-47.0%	23.4-32.2%	8.3-22.5%
■	▩	▨	░	□
N = 10	N = 11	N = 12	N = 11	N = 9

Crops by Region:	I 23.3	II 39.0	III 51.3	IV 65.8
	VIII 22.5	VII 26.1	VI 51.0	V 68.6

Table 15
Land Area, Crop Acreage 1979 and Persons Per Square Mile 1960 & 1980

		Land Area (square miles)		Persons Per Sq. Mile		
		Total	Percent Planted[1] To Crops 1979	1960	1980	1960-1980 % change
1.	Williams	2,064.2	29.7	10.7	10.8	1.0
	Divide	1,299.7	33.0	4.2	2.7	-35.7
	McKenzie	2,735.0	13.7	2.7	2.6	- 3.7
	REGION I TOTAL	6,098.9	23.2	5.7	5.4	- 5.3
2.	Ward	2,044.0	42.4	23.0	28.5	23.9
	Bottineau	1,677.2	50.0	6.7	5.5	-17.9
	Burke	1,118.7	31.7	5.3	3.4	-35.8
	McHenry	1,879.3	32.2	5.9	4.2	-28.8
	Mountrail	1,819.1	27.4	5.5	4.2	-23.6
	Pierce	1,037.9	46.1	7.1	6.0	-15.5
	Renville	886.3	49.7	5.3	4.1	-22.6
	REGION II TOTAL	10,462.5	39.0	9.3	9.2	- 1.1
3.	Ramsey	1,248.3	54.1	10.8	10.4	- 3.7
	Benson	1,402.7	47.0	6.7	5.7	-14.9
	Cavalier	1,511.7	61.4	6.6	5.0	-24.2
	Towner	1,042.9	55.5	5.4	3.9	-27.8
	Eddy	635.0	43.2	7.8	5.6	-28.2
	Rolette	912.5	38.2	11.7	13.4	14.5
	REGION III TOTAL	6,753.1	51.3	8.0	7.2	10.0
4.	Grand Forks	1,438.0	68.4	33.9	46.0	35.7
	Nelson	995.2	56.2	7.1	5.2	-26.8
	Walsh	1,285.9	65.8	14.0	12.0	-14.3
	Pembina	1,124.0	70.9	11.5	9.2	-20.0
	REGION IV TOTAL	4,843.1	65.8	17.9	20.0	11.7
5.	Cass	1,748.9	83.8	38.3	50.6	32.1
	Traill	861.0	80.4	12.3	11.2	- 8.9
	Steele	710.2	67.2	6.6	4.4	-33.3
	Ransom	861.1	54.2	9.4	7.8	-17.0
	Richland	1,449.1	62.2	13.0	13.2	1.5
	Sargent	852.9	52.4	8.0	6.5	-18.8
	REGION V TOTAL	6,483.2	68.6	17.9	20.5	-14.5
6.	Stutsman	2,264.3	45.7	11.1	10.7	- 3.6
	Wells	1,298.9	58.5	7.1	5.4	-23.9
	McIntosh	991.7	36.4	6.8	4.8	-29.4
	Logan	1,000.5	33.0	5.4	3.5	-35.2
	Foster	645.4	60.1	8.3	7.2	-13.3
	Dickey	1,143.2	50.3	7.1	6.3	-11.3
	LaMoure	1,135.9	59.2	7.7	5.7	-26.0
	Barnes	1,479.1	64.5	11.3	9.4	-16.8
	Griggs	709.9	52.1	7.1	5.2	-26.8
	REGION VI TOTAL	10,668.9	51.0	8.5	7.1	-16.5
7.	Burleigh	1.625.3	27.0	20.9	33.7	61.2
	McLean	2,065.0	36.8	6.8	6.0	-11.8
	Sheridan	988.6	30.5	4.4	2.8	-36.4
	Kidder	1,357.6	23.4	4.0	2.9	-27.5
	Emmons	1,503.1	35.2	5.6	3.9	-30.4
	Morton	1,920.2	23.8	10.9	13.0	19.3
	Mercer	1,041.5	21.4	6.5	9.0	38.5
	Oliver	720.8	22.4	3.6	3.5	- 2.8
	Grant	1,665.8	20.9	3.8	2.6	- 3.6
	Sioux	1,102.8	10.3	3.3	3.3	0.0
	REGION VII TOTAL	13,990.7	26.1	7.6	8.9	17.0
8.	Stark	1,316.1	29.8	14.0	18.0	28.6
	Slope	1,224.7	17.1	1.5	1.0	-33.3
	Hettinger	1,134.4	43.8	5.6	3.8	-32.1
	Golden Valley	1,014.0	17.0	3.1	2.4	-22.6
	Dunn	1,992.2	16.2	3.2	2.3	-28.1
	Bowman	1,169.9	23.9	3.6	3.6	0.0
	Billings	1,139.0	8.3	1.3	1.0	-23.1
	Adams	989.2	28.1	4.5	3.3	-26.7
	REGION VIII TOTAL	9,979.3	22.5	4.6	4.5	- 2.1
	STATE TOTAL	69,280.0	40.3	9.1	9.4	

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[1] Crops include 1979 preliminary estimates of acres of crops planted to wheat, barley, oats, corn, sunflower, flax, rye, potatoes, soybeans, dry edible beans, and sugar beets as reported in (1).

likely than farm operators in rural, less densely populated counties to have worked off the farm during 1978.[7/]

To what extent other farm operator family members participate in the nonfarm labor force in North Dakota is not presently known. National study data indicates that 64.7 percent of youth (ages 16-24) living outside SMSAs were in the labor force during 1979. Moreover, only 6.7 percent of those employed were employed in agriculture ". . . over 75 percent . . . (were) . . . employed in manufacturing, wholesale and retail trade, and the service industry."(33:8) Of course, since the structure of employment opportunities is different in North Dakota in comparison to the nation, participation in the labor force and the industry classification of jobs held by all farm family members is unlikely to precisely reflect the findings of national studies. At the same time, to the extent that national data is applicable, it serves to emphasize the role of off-farm employment and income sources as an important aspect of total farm family income. Nationally, in 1976, off-farm income was $30.3 billion while farm proprietors' net income stood at $18.7 billion. In 1979, off-farm income represented 52.6 percent of the total "Income of Farm Operator Families."(34:55) Clearly, nonfarm income, and particularly nonfarm wage and salary employment, must be considered as playing an important role in stabilizing the income from farm operations for a significant minority of North Dakota's farm families.

Net farm income amounts are dwarfed by the dollar amounts flowing through farm expenditure and gross income accounts. These transactions, incurred in the course of conducting farming as a business, are larger than the value of nonfarm wage and salary earnings, and form the driving force in many other industrial sectors. However, for at least one-third of North Dakota's farm operators, net farm income is subsidized by at least some work off

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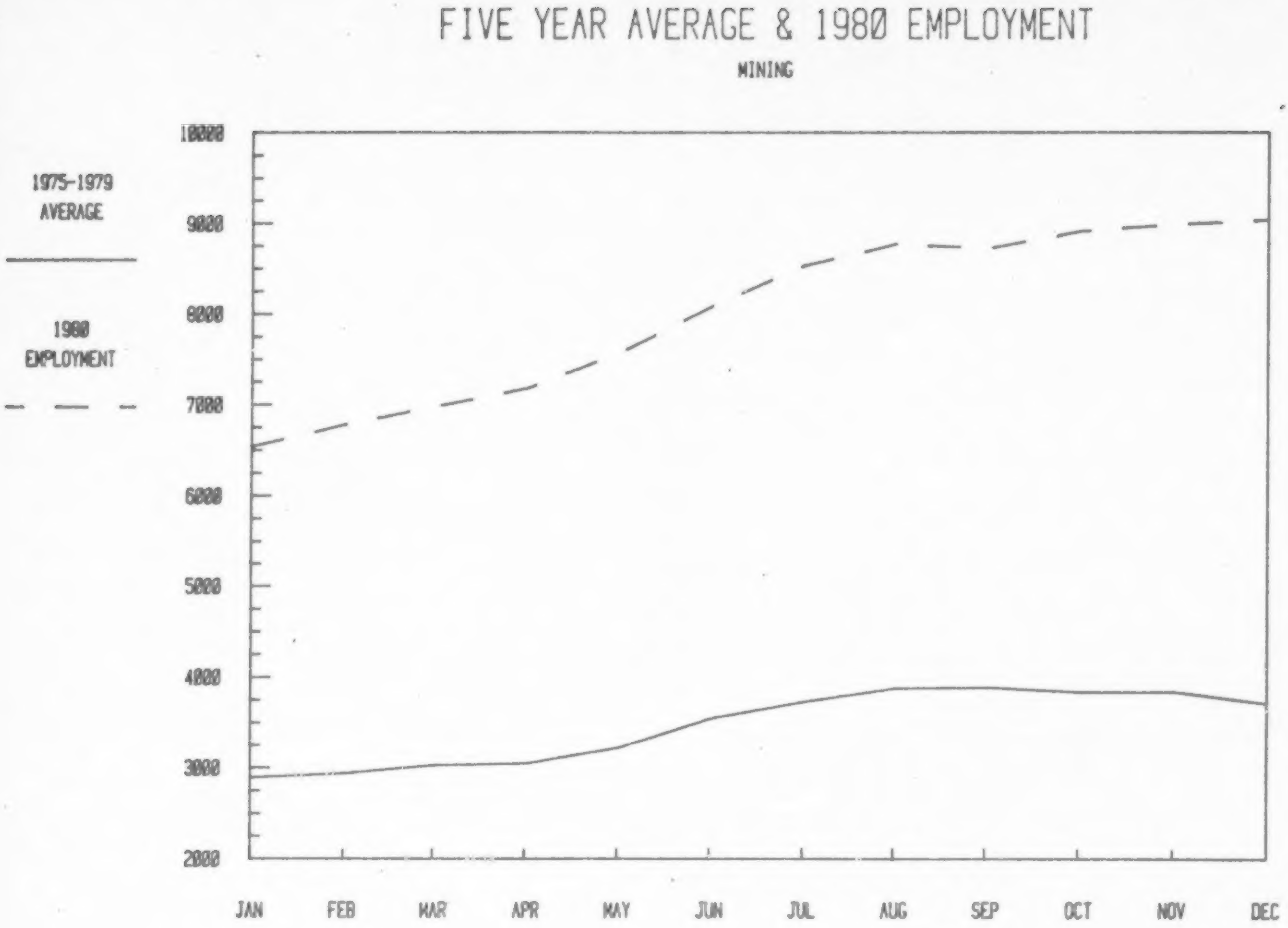
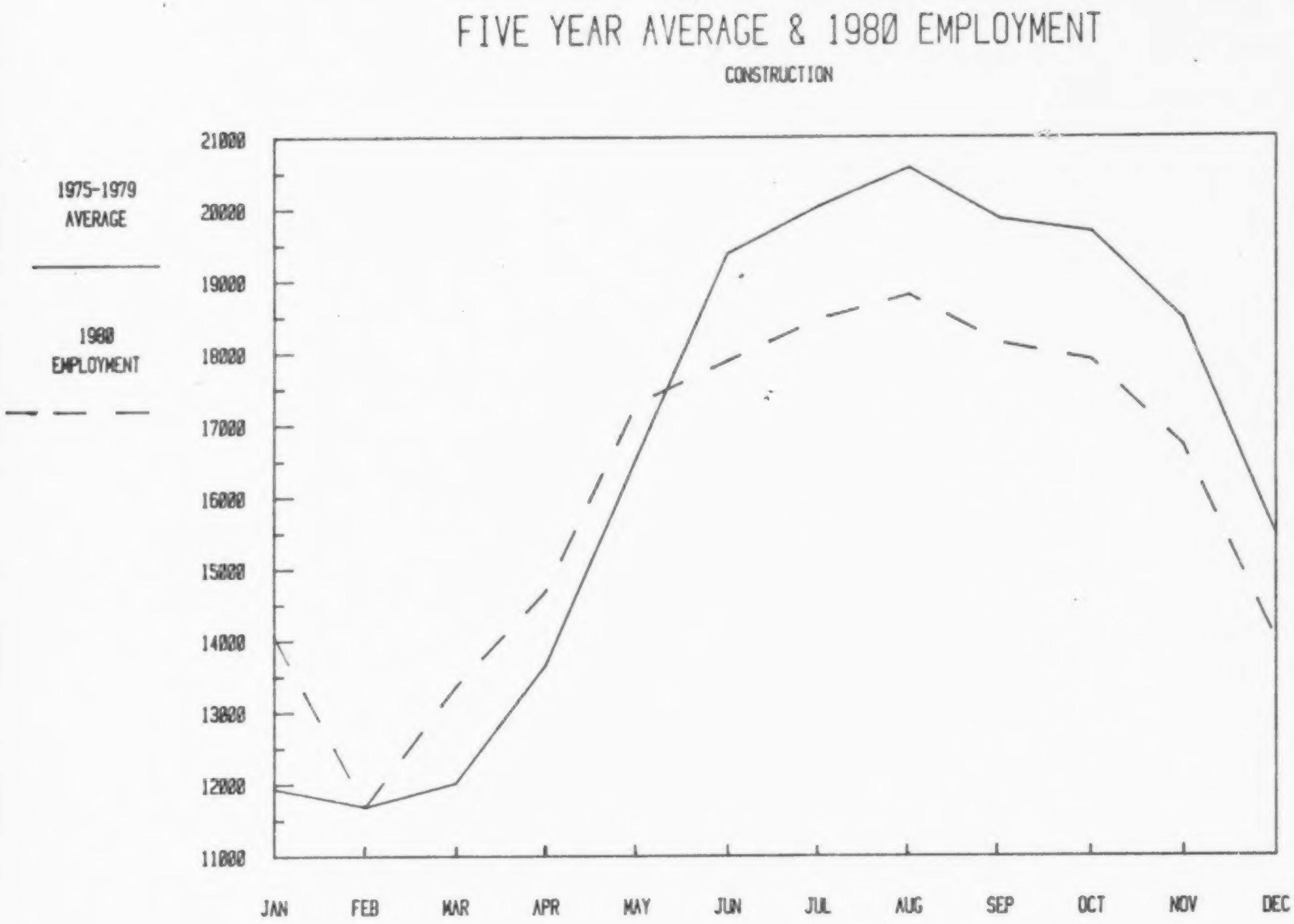
[7/] Census of Agriculture data for SMSAs indicates that there is an exception to the finding that farm operators in urban counties are more likely to have had experience in off-farm labor than are operators in rural counties. In the Bismarck SMSA, 40.3 percent, and in the Grand Forks SMSA, 41.6 percent of the farm operators had off-farm employment in 1978. But in the two counties comprising the Fargo-Moorhead SMSA, the percentage in Clay County was 42 percent, while the percentage in Cass County, at 32 percent, was lower than for the state as a whole.

the farm. Other adaptions in the farm community to consistently wide swings in net farm income are the increasing incidence of farm tenancy, part ownership, and the continued absorption of medium-size farms by larger farms (and potentially, by a growing number of small hobby and retirement farms). By any measure, whether in terms of aggregate totals, in terms of medium-size farms which decreased by 11.7 percent during the middle of the decade, or by a more restricted definition of a farm which leads us to a definition suggesting that there are closer to 35,000 rather than 41,000 farms, the number of farms has declined. With fewer farms and net farm income comprising a smaller margin relative to gross income, the future for rural retailers, urban wholesalers, and service businesses whose goods and services cater to farm family personal needs, rather than to agricultural inputs and commodity sales, appears to be bleak.



2. Mining

Seasonality is a key feature of North Dakota's economy. Work volume, employment and labor and proprietors' earnings all respond to ground freeze and thaw, holiday purchasing patterns, planting season, summer vacation, the tourist market, harvest, agricultural marketing, and processing. One of the exceptions to this pattern is mining. In 1980, employment in the mining industry reached 8,010 in comparison to an employment level of 2,100 in 1975. The bulk (81.8 percent) of mining employment is located in oil and gas extraction with 1,160 jobs in coal mining and 300 jobs in other mining (primarily sand and gravel). North Dakota is ranked number two in the country in the production of lignite coal, and in 1980, with oil production at 40 million barrels, became one of the top ten oil producing states in the nation. Coal production reached 15 million tons during 1980 and demand is expected to grow with some estimates as high as 20 million tons being produced by 1985. Oil exploration and extraction are also expected to grow in size and geographic scope. While oil and gas exploration is presently restricted primarily to the western third of the state, ". . . drilling is gradually progressing east since indications of oil reserves as far east as a meridian through Devils Lake and Jamestown are very good."(35:59) ". . . (C)urrent discovery rates in North Dakota . . . greatly exceed . . . the national discover average . . . . The Williston Basin has a long exploration future . . ."(36:3) In summary, led primarily by oil/gas exploration, we expect employment in mining to reach an annual average of 11,500 during 1982.

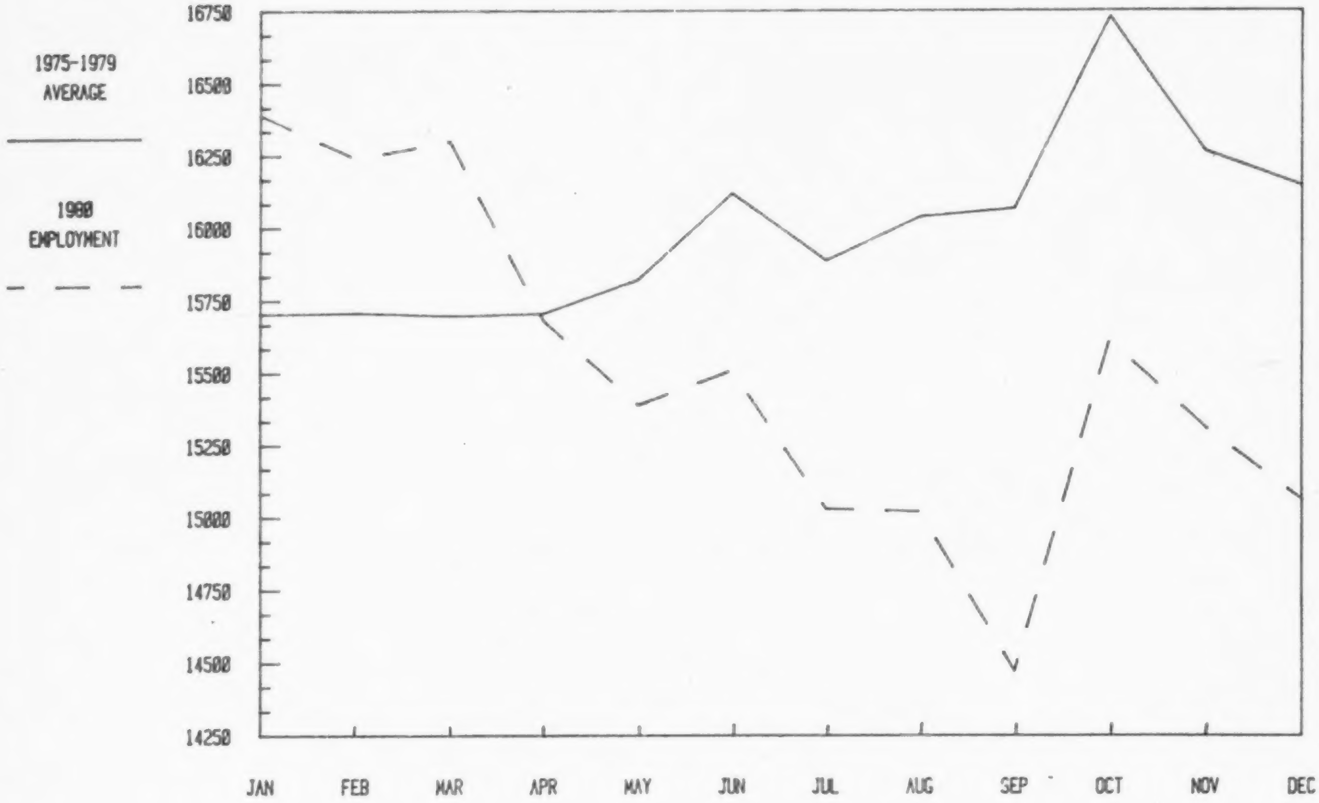


3. Construction

With 6.6 percent of all wage and salary jobs in 1980, earnings per job in the construction industry are among the highest. Construction jobs are also among the most seasonal, and are strongly affected by the nationally determined price of money. In 1980, 47.7 percent of construction jobs were in special trades. Of the remaining jobs, an approximately equal number were in general building and heavy construction. The 1980 employment level of 16,240 represents a more than 13 percent decline in jobs from 1978 (18,500 jobs) and 1979 (18,670 jobs). The number of jobs lost was greatest in general construction (-27.1 percent), with the remainder of the industry losing 5.2 percent of its employment. The rate of job loss in construction counts heavily in the sex distribution among the job insurance covered unemployed (see Appendix Table IVa), with 77.3 percent of the covered unemployed during 1980 being males. We expect employment to decline further in 1981 and then, during 1982, to regain some of its former strength with employment in the vicinity of 17,500. The present forecast for housing starts (37) suggests that the number of housing starts will gain by only 22 percent per annum for 1981 and 1982 over their low 1980 level. Commercial and industrial construction are expected to buoy employment in this industry during 1982.

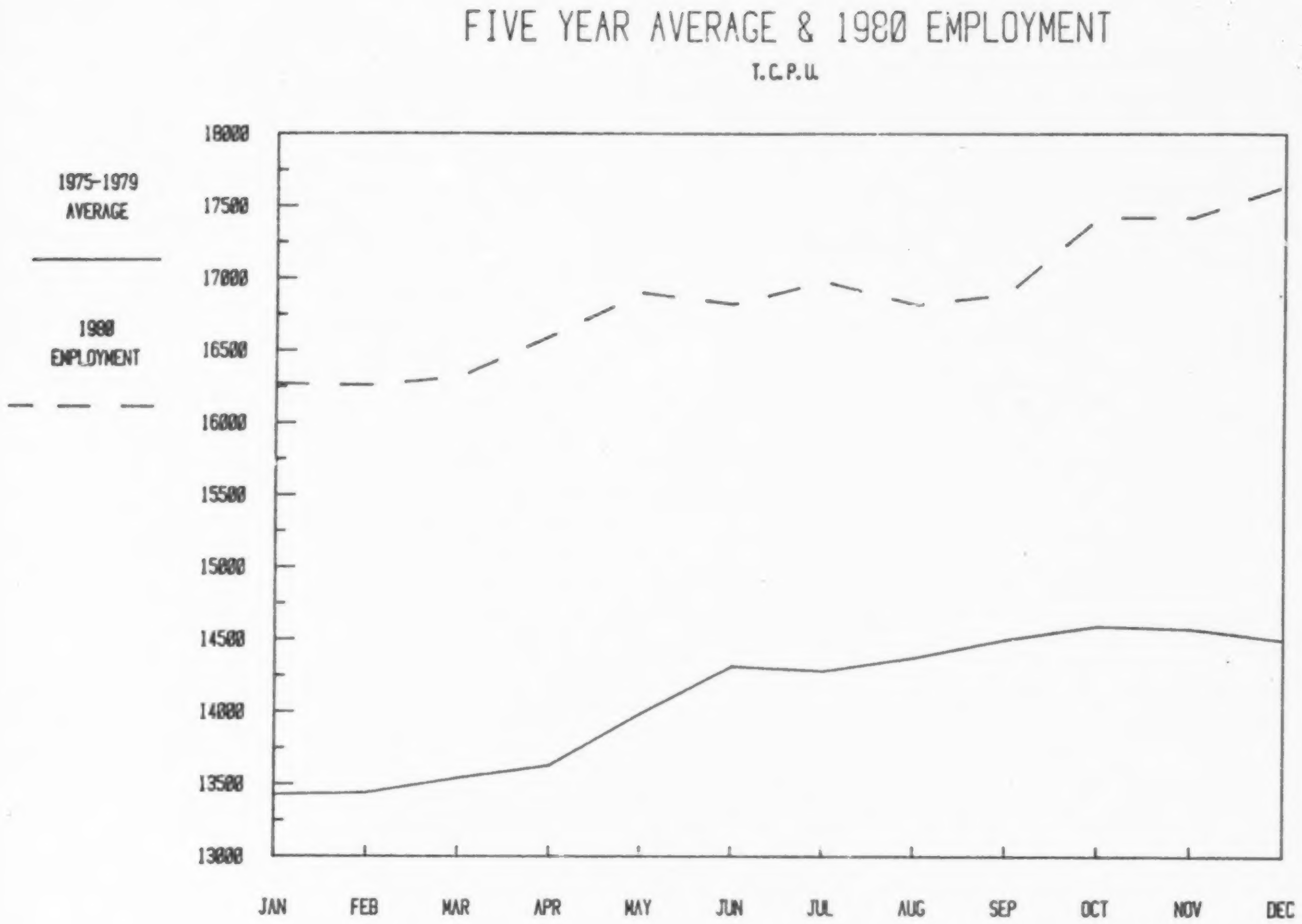
FIVE YEAR AVERAGE & 1980 EMPLOYMENT

MANUFACTURING



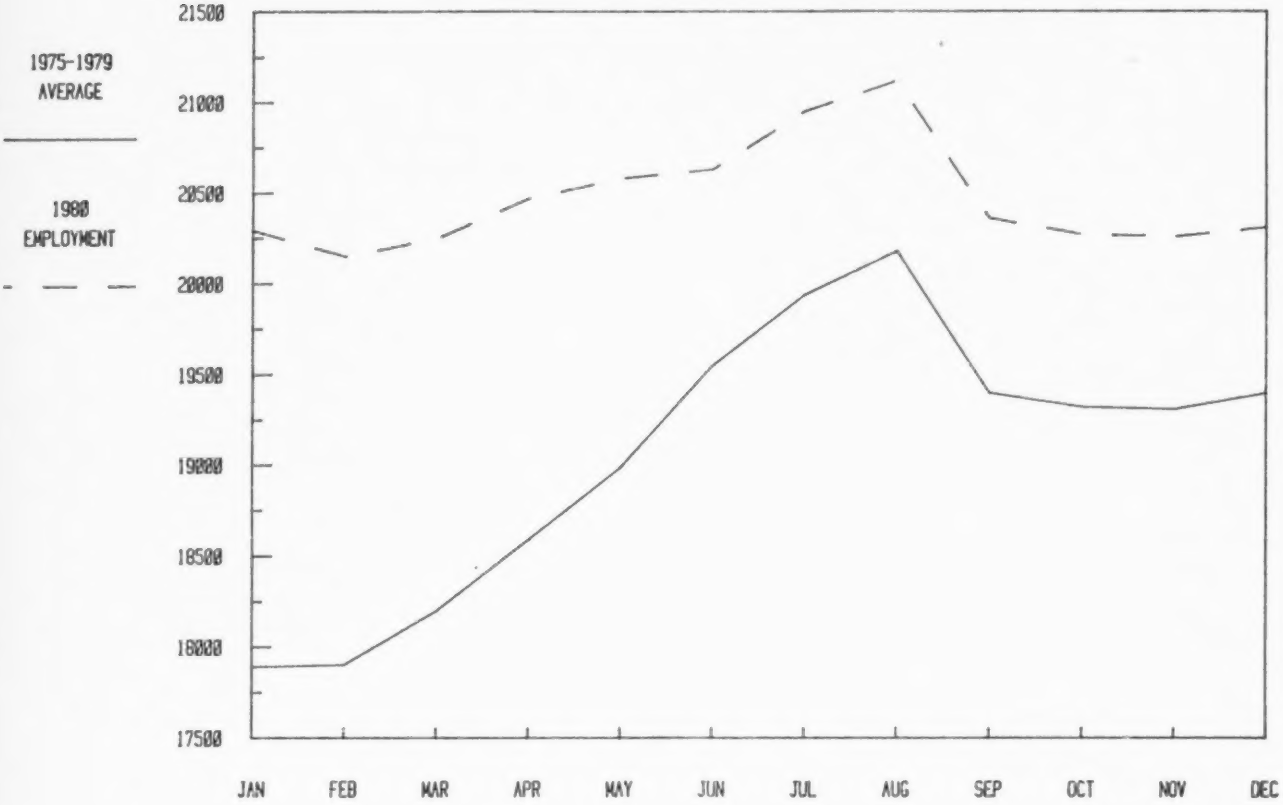
4. Manufacturing

Seasonality is also a factor in manufacturing employment. Responding primarily to annual harvest/food processing needs, manufacturing employment in October averages 1.07 times its February employment. This level of seasonality, while noticeable, is far less than the 1.76 seasonal variation in employment typical in the construction industry. Employment in manufacturing is divided nearly evenly between durable goods (7,720 jobs) and nondurable manufacturing (7,780 jobs, data are for 1980). Durable goods manufacturing employment is dominated by agricultural-related machinery and transportation manufacture (67.1 percent). Food and kindred manufacturing represents over half (51.7 percent of all employment in nondurables. Inhibited by drought and high interest rates, farm equipment purchases declined and inventories grew. During the winter of 1979-80, the average workweek began declining from a range of 41-42 to 34-36 hours per week. As manufacturers retained higher status employees, average earnings per employee increased while total employment and earnings declined. With interest rates declining during the latter half of 1981 and during 1982, we expect to see inventories decline and some recalls of production workers. The effect of high interest rates and sluggish economic conditions on nondurables may have been beneficial in that agricultural processing plants are being built only if there appears to be a guaranteed market for the product. By 1982, we expect to see manufacturing employment near 16,000.



5. Transportation, Communication, and Public Utilities (TCPU)

Seasonal, but offsetting, work activities over a year's course tends to flatten the labor demand curve in this diverse industry. In 1980, TCPU had 6.9 percent of all wage and salary jobs; 53.8 percent of the jobs were in transportation, and communications and utilities each had 23.1 percent of the employment. From 1970 to 1975, TCPU changed very little, maintaining its employment between 12,200 and 12,700 jobs. However, since 1975, the number of jobs in this industry has grown at a 5.8 percent per annum rate. Even with the drought/recession of 1980, employment grew at a 4.5 percent rate, and covered earnings grew at a rate nearly twice as fast as for covered jobs as a whole (Table 12). Various, and sometimes opposing, forces and circumstances have and are affecting TCPU employment. The trucking and warehousing segment of the industry has seen substantial growth as the industry as a whole reorients itself around the production and export of mineral resources. Other forces influencing TCPU employment include rail branch line abandonment, truck deregulation, fuel price increases, efforts to create a rationalized transportation system (38), and technological innovation. The ratio of labor to capital in this industry is relatively low. This means that the need for labor changes in geometric, rather than linear, proportions to demand. Currently, low capital utilization rates, due in large part to the same types of factors (recession/low grain prices) affecting manufacturing, and technological innovation, have led to some first and second quarter 1981 layoffs in TCPU. The combined effects of the recent recession, and structural changes in the industry, leads us to conclude that employment in TCPU will grow at a 2 to 3 percent rate for 1981 and 1982.



FIVE YEAR AVERAGE & 1980 EMPLOYMENT

WHOLESALE TRADE

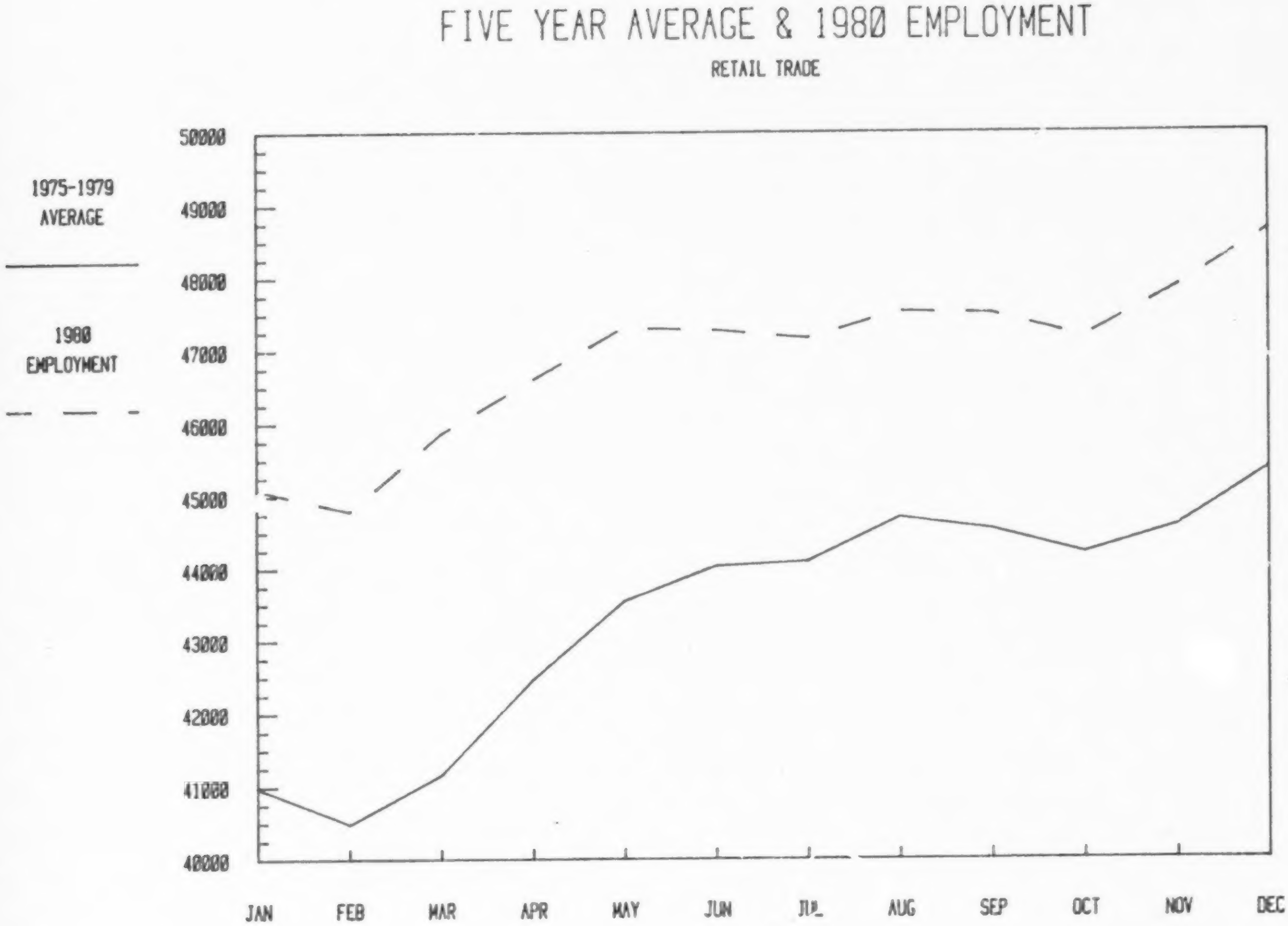
6. Wholesale Trade

Spurred by expansion in mining, agricultural transactions, and personal income growth, employment in wholesale trade increased by an average per year of 5.8 percent from 1975 to 1979. But from 1979 to 1980, the number of jobs declined by 4 percent to 20,470. This loss in employment was nearly evenly distributed between durable (which has 52 percent of 1980 employment) and nondurable goods wholesaling. Seasonality, the 1980 slide in employment, and the rural nature of wholesale employment is related to the fact that farm implement dealers, grain elevators, and bulk petroleum dealers account for over 40 percent of wholesale employment. Branch line abandonment and the development of sub-terminal elevators (TCPU) can be expected to have an effect on the rural-urban distribution of employment in wholesale trade.

The study, serving as the basis of Figure V, states:

> Grain elevators are very important to agricultural communities . . . not only because of the marketing services they provide farmers, but also because most of them also handle various supplies needed by farmers and ranchers . . . . Farmers tend to patronize firms in those towns where they market their grain. (27:17)

Almost 65 percent of all covered employment (1979) is located in nine urban counties. In contrast, 62.5 percent of wholesale employment is located in these same urban counties--less than any other private sector direct consumer-oriented industry discussed in the remainder of this chapter. As the economy responds to lower interest rates and "normal" weather conditions, we expect wholesale employment to return to its 1979 level, but we also expect that a greater proportion of that employment will be located in urban counties.

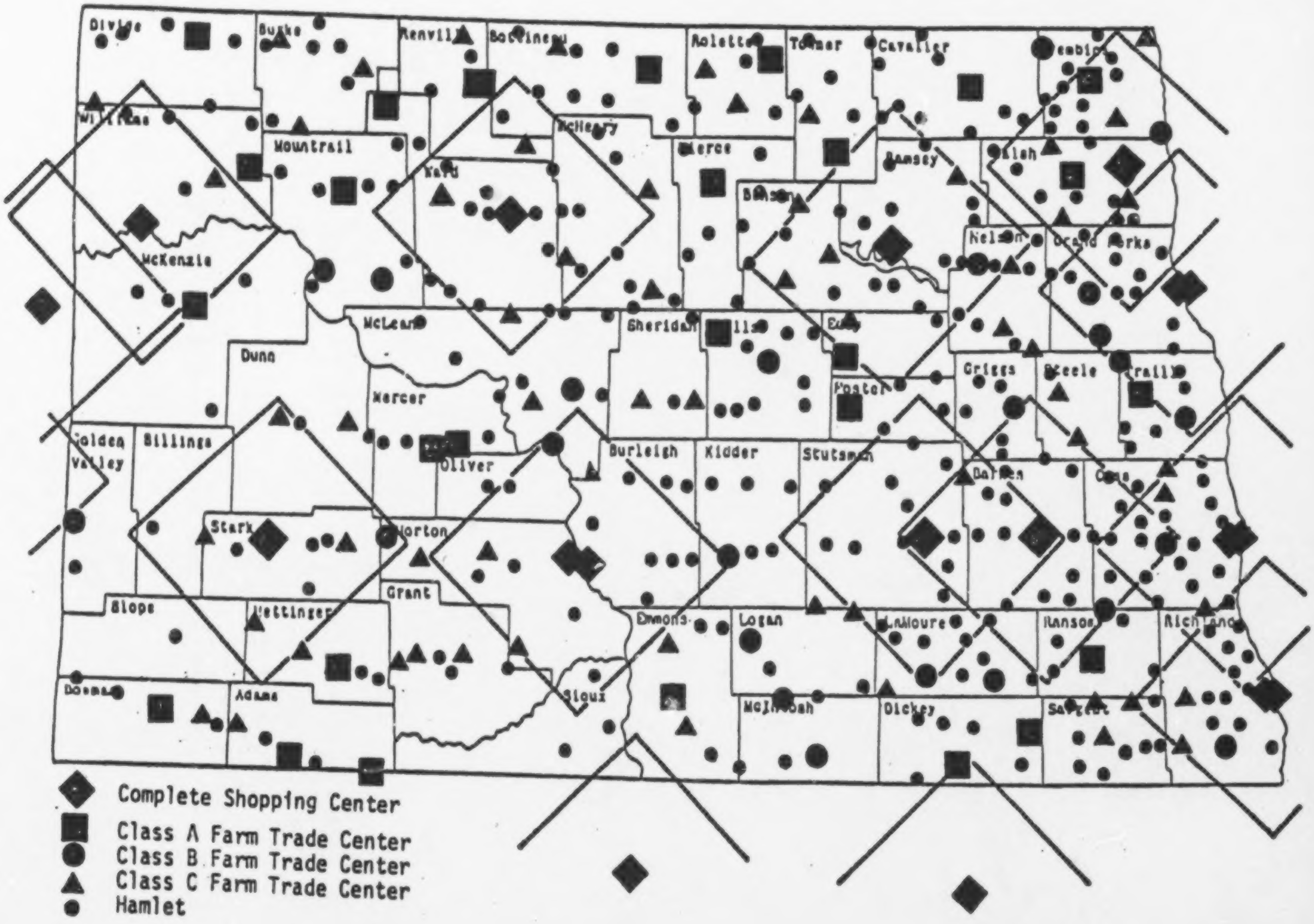


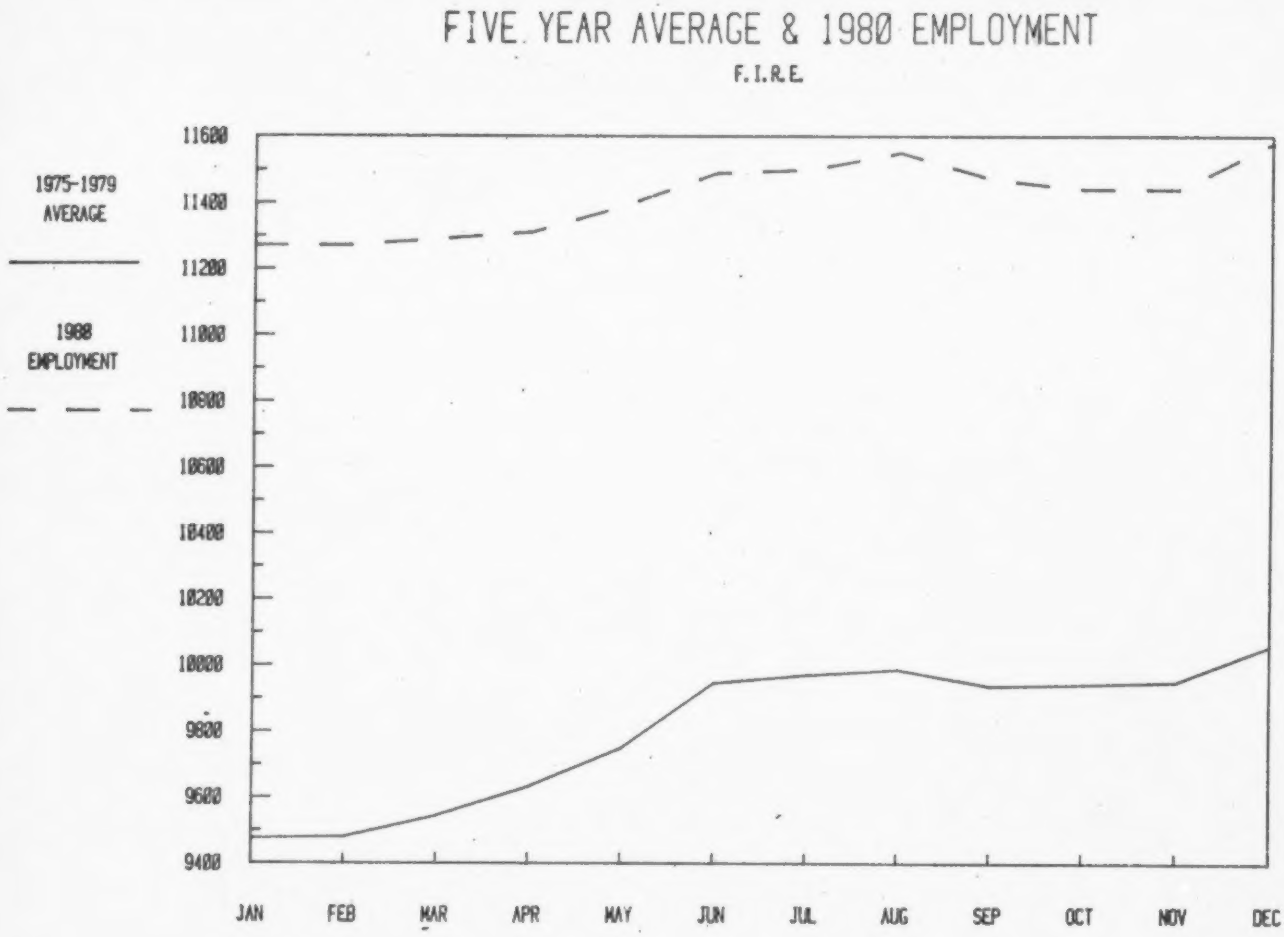
7. Retail Trade

Following rapid employment growth between the recessions, retail trade in 1980 was the state's third largest employer with 19.1 percent of all wage and salary jobs. Throughout the '70s, there were 2.3 jobs in retailing per job in wholesaling. But earnings per job, or employer costs in retailing were only half of what they were in wholesaling (Table 10). From 1973 to 1979, employment in retail trade grew at a per annum rate of 4.5 percent. Major shopping malls were built in seven of nine urban counties, and much of the employment growth also occurred in these same counties. Although urban counties have only 57.6 percent of the population, 72 percent of covered retail jobs in 1979 were located in urban counties. Some observers in the late '70s were suggesting that retail trade was too optimistic in its expansion efforts. During the drought/recession of 1980, the rate of employment

(1.3 percent) and employee earnings (6.0 percent) growth was cut in half relative to 1979 (Table 10). However, only one industry segment lost employment at that time. Major corporate restructuring in the gasoline retail segment of the industry, fuel price increases, and high interest rates were among the factors bringing about a 7.4 percent employment decline in the auto dealers and gas station subdivision of the industry. With substantial underutilization of relatively new facilities, and the dependency of retailing on agriculture, interest rates, nonretailing employment, and real growth in personal income, it is suggested that employment growth in retailing during 1981 and 1982 will be in the 2 to 3 percent range.

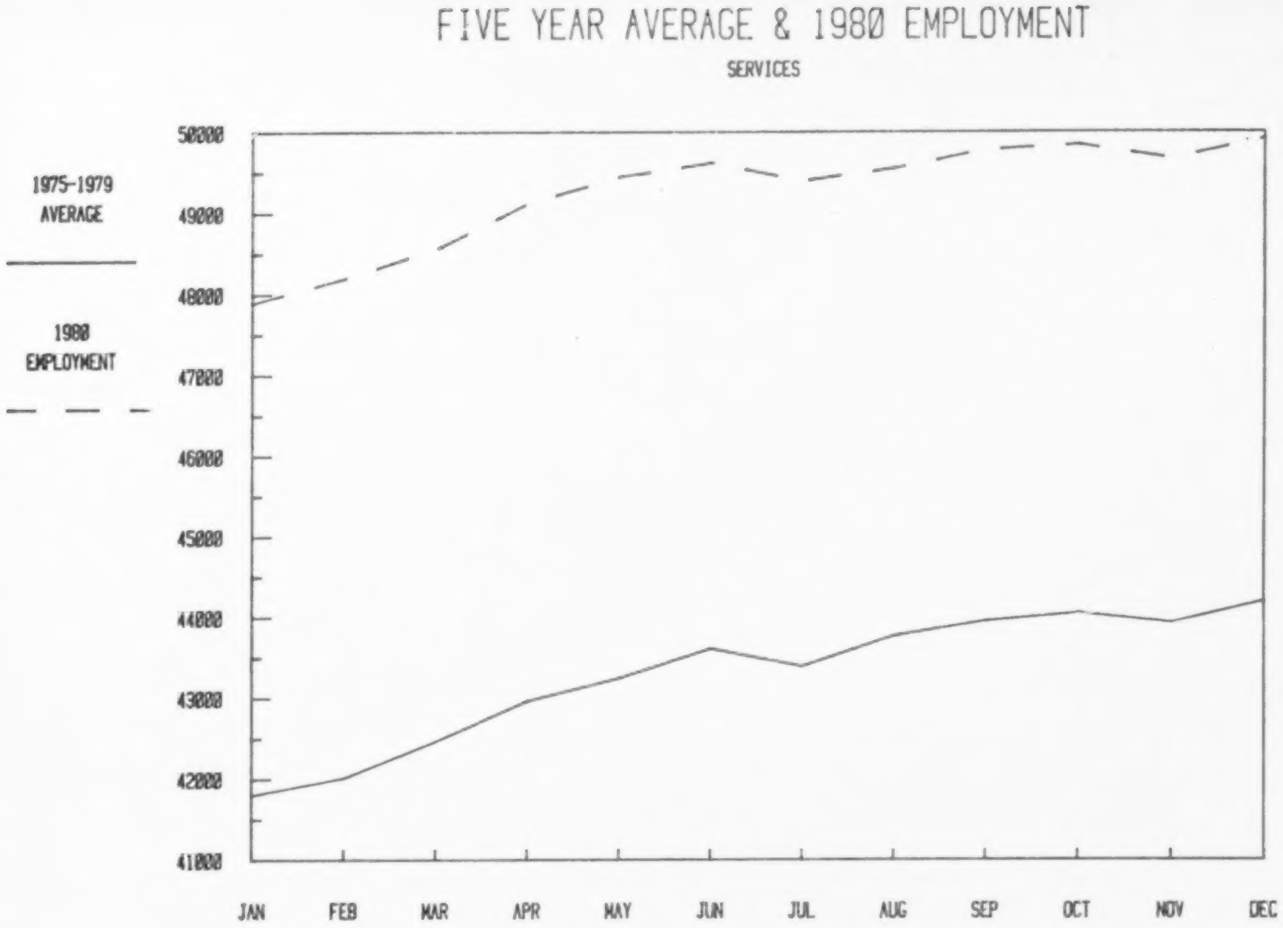
Figure V: Geographical Relationship Between Farm Trade Centers and Complete Shopping Centers in North Dakota





8. Finance, Insurance, and Real Estate (FIRE)

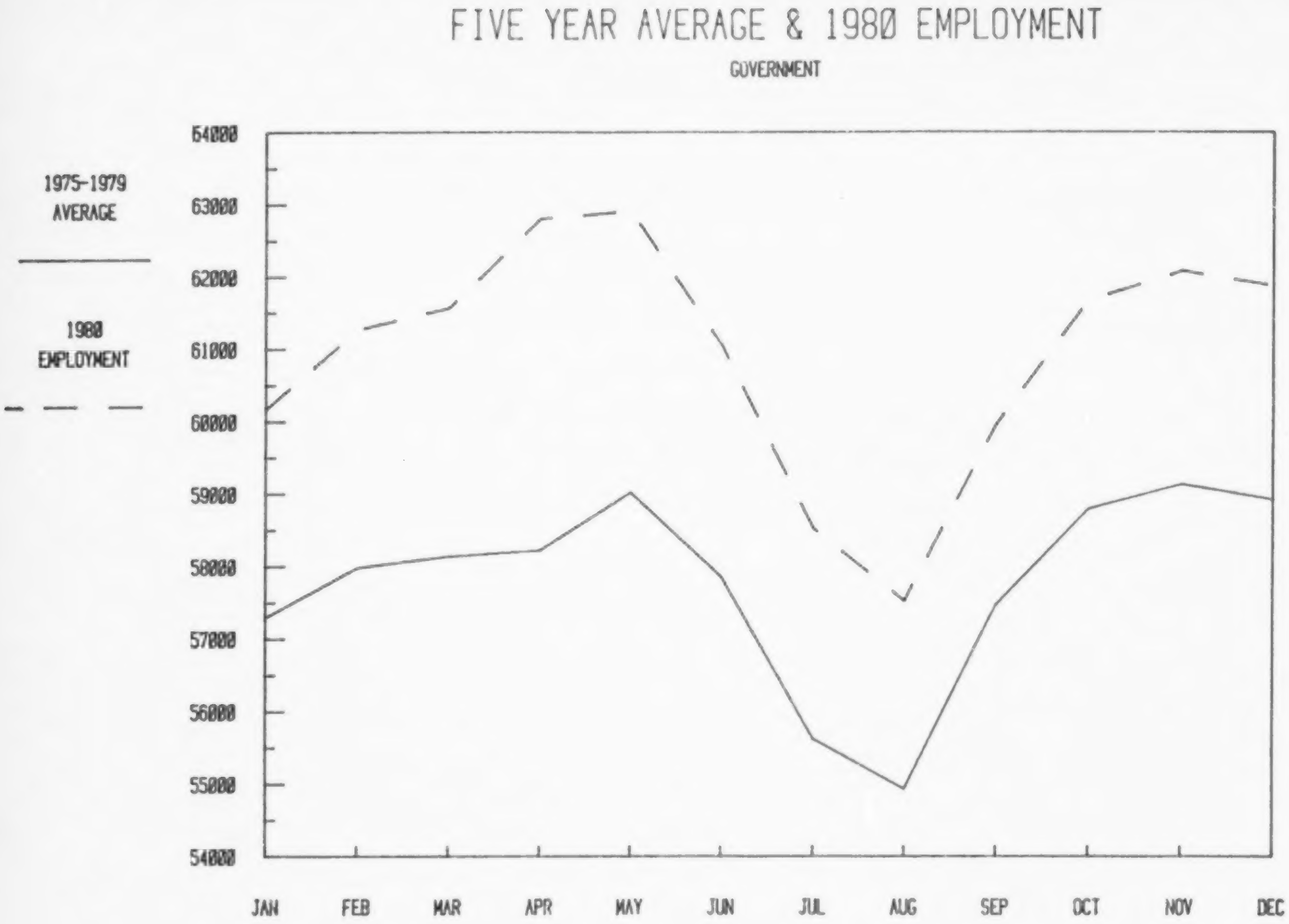
Unlike retailing, with its major seasonal thrust during the winter holiday season, FIRE demonstrates comparatively little seasonal employment fluctuation. However, the industry represents only 4.7 percent of all wage and salary jobs and its stabilizing effect on the state's seasonal employment swing is relatively minor. Banking, with 36.6 percent, and insurance agents, carriers, and brokers with 30 percent of the employment, dominate a largely urban industry (70.1 percent in 1979). Employment growth stood at an average per annum rate of 4 percent from 1970 to 1975 and, responding to the housing boom, grew at a 6.6 percent rate from 1976 to 1979. The drought/recession brought the rate of employment increase down to 3.7 percent in 1980, and we expect employment to grow at the 4 percent rate during 1981 and 1982. FIRE, like several other industries discussed thus far, is responding to the circumstances of population change, fuel prices, rapid (computer-based) technological innovation, deregulation, and high interest rates by reorganizing its services in ways that affect where (rural/urban), how much, and in what occupational mix labor is required. Examples of the industry's restructuring are: renegotiable rate and shared appreciation mortgages, an increased emphasis on automated customer services, and the introduction of substations in rural areas. None of these responses to changing circumstances represents a short-term revolution in the industry, but combined and viewed over the long term, these emerging themes are likely to substantially alter labor demand in the industry.



9. Services

With 1980 employment of 49,250, the services industry is the second largest provider of wage and salary jobs in the state and had, in 1979, the second lowest earnings per covered job. The industry is comprised of employment in hotels and other lodging (8.9 percent), medical services (43.7 percent), and other services (47.4 percent). The rate of employment growth during the '70s was largely unaffected by the boom in housing with a 5.7 percent per annum growth rate from 1970 to 1975, and a 5.2 percent average growth rate from 1976 to 1979. During the last five years of the decade, services added 10,180 jobs, and like wholesale trade, retail trade, and FIRE, employment is urbanized (68.3 percent in 1979) out of proportion to population. Moreover, certain subdivisions and occupations in the services industry are even more urbanized; for example, ". . . the ten most populous counties . . .

have . . . 80.3 percent of the state's physicians . . ."(39:VI-139) During 1981 and 1982, the services industry's employment growth rate is expected to remain near 3 percent--the growth rate it demonstrated in 1980. Aggregate employment in the services industry exhibits little of the seasonal variation typical of most other industries. To some extent, as well, the banker's substation model has been applied to medical services resulting in the emergence of the rural satellite clinic. However, since there are few mandates requiring private sector service extensions into low population density, medium income areas, it is likely that the private service industry will continue to seek its employees in a largely urban labor market.



10. Government

Unlike the private sector, governmental services are mandated in rural areas. Consequently, only 60.5 percent of government employment is located in urban counties. Moreover, the seasonal employment and earnings cycle in government runs counter to the prevailing yearly cycle of most employment in the state, and is a major stabilizing factor in the state's economy. Government employment and earnings rise during the winter months. For example, during the first quarter of 1979 only 16.7 percent of all covered earnings in construction had been disbursed, while 24.8 percent of government earnings had been paid. In 1980, the 60,950 jobs in government represented nearly a quarter of all wage and salary jobs (24.8 percent). However, an estimated 8,500 of these jobs are held by elected officials. Federal employment accounts for 16.1 percent; state employment, 27.2 percent; and local employment, 56.6 percent. Most state and local government employment (52.5 percent) is in educational services. Direct federal expenditures (a portion of which is distributed through the state's special funds) amounted to $1.67 billion in FY 1980, while state general fund expenditures amounted to $0.64 billion during the 1979-81 biennium. Direct federal funds (FY '80) are equivalent to 58.8 percent of gross farm income (1979), or 60.5 percent of total covered earnings (1980), and were distributed as follows: Defense-Military, 18.6 percent; Farm Income Stabilization, 16.3 percent; Health Care Services, 8.4 percent; General Retirement and Disability Insurance, 20.7 percent; and other, 36 percent.(40) Although there are state level legislative mandates affecting an increase in state government employment during 1981-82, the effects of a shrinking federal budget will be responsible for an overall moderate employment decline during 1982.

11. Summary

Led by weather conditions, and the cycle of agricultural purchases and marketing, the number of people employed during the summer of 1980 was one-fifth greater than employment during the winter. Seasonality is a key feature of North Dakota's economy and employment. The monetary value of both agricultural production expenditures and gross farm income exceeds the total value of nonfarm covered earnings. It is no surprise that the state's economy has historically been much more responsive to international agricultural market prices and problems, and local weather conditions than to the national business cycle. However, during the mid-1970s, agriculture continued to move towards the capital intensive large farm/ranch. Agricultural land prices and the cost of land transfer rapidly escalated, and the housing boom (peaking in 1977), all drew increasing proportions of the state's economy more deeply into the national credit system and the national business cycle. With the drought of 1980, and the prime interest rate exceeding 20 percent during the winter of 1979-80 and again during the late summer of 1980, growth in employment dropped below 1 percent and growth in covered earnings fell below the rate of inflation. During 1981 and 1982, we expect to see agricultural production and income recover from the drought of 1980, substantial expansion in mining, and the overall economy of North Dakota to fare better than the nation as a whole.

VI. DEVELOPMENTS AND OUTLOOK BY OCCUPATION

A. Introduction

Statistical programs designed to provide a current description, or a short-term projection of the labor force's occupational structure, are based on the assumption that the occupational structure of each particular industry changes very slowly.(41:158) An increased number of people employed in an industry, it is assumed, will fit into a fairly static occupational structure (also referred to as an industry's staffing pattern or the distribution of employment among occupations). An economy-wide growth level for a single, particular occupation is measured as the sum of occupational growth on an industry by industry basis. Under present forecast methods, future occupational demand is treated as the result of industry employment growth. Employment growth, in turn, is viewed as a response to the demand for each industry's goods and services. In effect, most occupational forecasts take their lead from an industry-based demand for output forecast, and the assumption that occupational staffing patterns in most industries will remain static.

But staffing patterns do not remain static. The accuracy of long-term employment forecasts is affected by factors not in evidence during the time of the forecast, and by factors whose effects are less predictable than is the future demand for goods and services. Nondemand factors affecting staffing patterns are: the level of technological innovation, the rate of increase in the substitution of capital for labor, changes in the organizational structure of industry (e.g., capital concentration and degree of unionization), the supply of labor, and as far as localities are concerned, capital and industrial migration are all factors affecting the future occupational structure of the labor market. Measurement of nondemand factor effects on industry staffing patterns is accomplished by referring to each decennial census.

To the extent that particular occupations have growth rates which contrast with employment growth within the industry as a whole, there exists an indication that nondemand factors are affecting occupational growth. Occupational growth rates that diverge from the normal trend can, and often are, incorporated in forecasts under the assumption that the past is the only reliable, unbiased indicator of the effects of nondemand factors upon future staffing patterns.

Although nondemand factor effects on staffing patterns are derived from industry specific data, the principle can be illustrated from a review of economy-wide 1960 and 1970 staffing pattern data for North Dakota. The effects of both demand and nondemand factors are illustrated in Table 16 which shows the distribution of employment in North Dakota by an individual's chief or primary occupation. The column headed "Distribution Expected, 1970" represents the distribution of occupations had each occupational category declined in proportion to the 2.5 percent decrease over the decade in statewide employment. The percentages in the final column indicate the extent to which the actual staffing pattern in 1970 reflected what one would statistically expect without the potential confusion associated with percent changes calculated on different numerical bases. These data show, for example, that industry demand and nondemand factors acted together to maintain the number of nonfarm managers and administrators in nearly the same proportion (101 percent) to the 1970 total as they were to the 1960 total. There were, on the other hand, far more (127.3 percent) clerical and kindred workers in 1970 than one would have expected given the downturn in total employment. An industry by industry evaluation of clerical worker occupations may reveal either that industries in which clerical workers predominate expanded during a ten year period, and/or that a greater proportion of employment in each industry has become dominated by clerical functions even though total employment declined. In either instance, the method employed above illustrates the approach to using historical data in identifying occupational growth trends that are dissonant with employment growth, and from that data, creating nondemand factors for forecasting purposes.

The following two sections briefly outline the procedures used and describe the available data on national and state level forecasts of occupational staffing patterns. Detailed national and state level occupational forecasts are presented as Appendix Table IIIa, and Part II of the Reference Section lists several survey-based, published

Table 16

Occupations of Employed Persons Aged 14 and Over North Dakota, 1960 and 1970(42)

Occupation	1960	1970	1960-1970 Change N	1960-1970 Change %	Distribution Expected 1970	Actual 1970 as a % of Expected Distribution
Professional, Technical, and Kindred	19,797	26,384	6,587	33.3	19,297	136.7
Nonfarm Managers and Administrators	20,474	19,766	-708	-3.5	19,957	101.0
Sales Workers	12,830	12,892	62	0.5	12,506	103.1
Craft and Kindred Workers	20,751	25,746	4,995	24.1	20,227	127.3
Craftsmen, Foremen, and Kindred	19,106	19,913	807	4.2	18,623	106.9
Operatives, Except Transportation	8,639	9,345	706	8.2	8,420	111.0
Operatives, Transportation	6,632	6,383	-249	-3.8	6,464	98.7
Nonfarm Laborers	6,603	5,823	-780	-11.8	6,435	90.5
Farmers and Farm Managers	53,707	34,210	-19,497	-36.3	52,350	65.3
Farm Laborers and Foremen	15,391	8,022	-7,369	-47.9	15,002	53.5
Service Workers, Except Private Household	20,146	27,792	7,646	38.0	19,637	141.5
Private Household Workers	5,147	3,549	-1,598	-31.0	5,017	70.7
Occupations Not Reported	4,438	8,436	3,998	90.1	4,326	195.0
Total	213,661	208,261	-5,400	-2.5	208,261	100.0

descriptions of occupational staffing patterns for North Dakota's industries.

B. National Occupational Forecasts

Bureau of Labor Statistics (BLS) assumptions about industrial growth rates and the techniques used to develop employment forecasts by occupation, form the context within which states develop occupational forecasts.

In the BLS national forecast, a person's occupation is described in terms of his or her chief and major occupation. For example, although we know that a substantial number of those whose primary occupation in 1976 (see Table 17) could best be labeled "Farmer or Farm Worker" had off-farm earnings in nonfarm occupations, these other occupations would not be included as part of the forecast scheme. The problem of failing to forecast secondary occupations exists because the BLS uses census material which focuses upon the work activity consuming the most hours during the week prior to the date of the census.[1] The use of census data constrains analysts to a narrower than desirable cross-tabulation of occupations by industries and forces the manipulation of these data to match the annual average concept used in most labor force statistics. "The BLS begins with Decennial Census data on the distribution of employment among 417 occupations for each of 215 industries. An initial requirement is to adjust Census figures so that they will reflect annual average employment in 1970 instead of employment during the April Census week."(41:156) In this process, nonprimary occupations are omitted and the employment data are "forced to" and presented as, annual averages.

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[1] The occupational instructions (20 percent sample) for Census Day, Wednesday, April 1, 1970, state: "Describe clearly this person's chief job activity or business last week, if any. If he had more than one job, describe the one at which he worked the most hours." This note concerning the decennial census methodology and the pre-field work timing of the Census Day also helps explain why the Census Bureau (see Table 16) reported only 42,232 farmers, farm managers, foremen, and laborers in 1970 when in 1974 (Table IIh) it reported 42,710 farm operators exclusive of laborers.

National occupational forecasts,[2] as outlined previously, are based upon a long-term economic growth forecast, a forecast of employment by industry (each of 215 industry divisions), and finally, an aggregation of 417 forecast occupations included in each industry. Employment by industry forecasts are based upon assumptions about the long-term demand for the industry's output, the types of historical employment data presented in the text and appendix tables of this publication, and upon the judgments of BLS analysts specializing in monitoring industry employment statistics. Industry specific staffing pattern change data, on the other hand, are derived from 1960 to 1970 decennial census change factors. More recent staffing pattern data are gained from "The Current Population Survey (CPS) . . . (which is used as) . . . the source for data on total employment, (and) employment for broad occupational groups . . . . Other sources of occupational employment data include . . . regulatory agency statistics on employment by occupation in the telephone, railroad, and air transportation industries; U.S. Civil Service Commission statistics . . . licensing data and membership records of professional societies . . ." (43:53) In other words, in order to broaden the occupational scope of forecast efforts beyond the 417 census-imposed occupational limit, and in order to establish trends on the basis of data points more frequent and current than the 1960 and 1970 Census, BLS is forced to rely upon nonsystematic, fragmented, and noncomplementary data sources. A program designed to overcome the problems of fragmented and infrequent staffing pattern data is the Occupational Employment Statistics (OES) program which is described in the following section.

The BLS national, as well as state level BLS-guided, program of forecasting staffing patterns is intended to produce descriptive statistics appropriate to the analysis of long-term occupational demand. Staffing pattern forecasts are couched in terms of average growth rates and stated in terms of annual averages; they do not focus on occupational growth rates characteristic of either the peaks or troughs of the business cycle. Moreover, scenario forecasts intended to demonstrate policy effects (e.g., rapid expansion of the federal military budget), or showing the effects on the occupational structure of an energy or other commodity price shock, and other "what if?" approaches have not been built into the published forecasts. Staffing pattern forecasts are intended to describe long-term trends along conventional lines.

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[2] Notice and publication of revised national occupational forecasts are found in the Department of Labor/Bureau of Labor Statistics' periodical, "Monthly Labor Review."

The national forecast data in Table 17 reveals that clerical workers as an occupation are the most rapidly increasing segment within the economy. By 1985, the BLS forecast suggests, nearly one-fifth of all individuals employed (19.2 percent) will be in clerical occupations. By 1985, the national forecast suggests, there will be 14.8 million service worker jobs in comparison to 12 million jobs in 1976. Two other occupational categories are expected to grow more rapidly than total employment. Nationally, occupations described as managers, officials, and proprietors are expected to grow at an average rate of 218 thousand jobs per year between 1976 and 1985. Craft and kindred workers are expected to grow at an average rate of 269 thousand positions per year. The data in Table 17 also shows that only one category of occupations (farmers and farm workers) are expected to decline during the early 1980s. Other occupational groups, for example sales workers, are expected to decline in relative proportion to total employment even though in absolute numbers these occupational groups are expected to show growth. Based on BLS projections, by 1985, United States employment will have grown to an annual average of 104 million jobs with over one-third of those jobs being in clerical and service occupations.

C. State Occupational Forecasts

Contrasting national and state level occupational forecasts (developed under comparable systems such as those presented in Table 17 and Appendix Table IIIa) provides the analyst/planner with information on the geographic scope of occupation specific growth. Rapid national growth in a limited number of occupations could lead to intense competition between the state and other geographic areas for qualified personnel. The statistics in Appendix Table IIIa, for example, indicate that technical engineering jobs are growing faster nationally (by 22.6 percent from 1976 to 1985) than they are in North

Table 17
Occupational Employment Projections
United States and North Dakota
1976-1985

	UNITED STATES						NORTH DAKOTA					
	Number		Column Percent		1976-1985 Change		Number		Column Percent		1976-1985 Change	
Occupational Title:	1976	1985	1976	1985	Number	%	1976	1985	1976	1985	Number	%
Professional, Technical, Kindred	13,327	15,757	15.2	15.1	2,430	18.2	37,025	42,826	12.6	13.0	5,801	15.7
Managers, Officials, Proprietors	9,313	11,278	10.6	10.8	1,965	21.1	38,328	45,860	13.1	13.9	7,532	19.7
Sales Workers	5,495	6,409	6.3	6.1	914	16.6	15,120	18,555	5.2	5.6	3,435	22.7
Clerical Workers	15,554	20,043	17.8	19.2	4,489	28.9	35,724	44,967	12.2	13.6	9,243	25.9
Craft and Kindred Workers	11,298	13,715	13.0	13.2	2,417	21.4	33,357	40,817	11.4	12.4	7,460	22.4
Operatives	13,352	15,616	15.3	15.0	2,264	17.0	23,186	26,493	7.9	8.0	3,307	14.3
Service Workers	12,003	14,811	13.7	14.2	2,808	23.4	42,875	49,574	14.6	15.0	6,699	15.6
Laborers, Except Farm	4,324	4,812	4.9	4.6	488	11.3	8,653	9,766	3.0	3.0	1,113	12.9
Farmers and Farm Workers	2,822	1,860	3.2	1.8	-962	-34.1	58,467	50,974	20.0	15.5	-7,493	-12.9
TOTAL	87,488	104,301	100.0	100.0	16,813	19.2	292,735	329,832	100.0	100.0	37,097	12.7

Dakota (15.0 percent). Higher national than local growth rates for occupations that are geographically mobile could lead to occupational bottlenecks and hinder the state's economic growth. A comparison of state and national occupational growth forecasts represents one means of approaching the (population-related) issue of occupational demand and competition for labor supply.

Outside the area of pragmatic planning concerns, state/national comparisons indicate how North Dakota's staffing pattern may look in the even more distant future as the state's economy comes more and more to resemble the national economy. In all but two of nine categories of occupations in Table 17, the occupational structure of the state and the nation are becoming more closely aligned. To the extent that job opportunities in the state come to more closely resemble the structure of job opportunities in the nation, the people of the state come more closely to live within the sphere of the national experience and quality of life.

The state level data presented in Table 17 are produced within the industry growth context established by the Bureau of Labor Statistics. In the methodology used to project North Dakota's employment growth to 1985, national growth is forecast by BLS for each industry. These national growth rates are applied to North Dakota's unique industry mix and related staffing pattern. The occupational outcome statistics are then reviewed and edited by state and regional forecast analysts. State level forecasts, like national forecasts, focus upon the structure of long-term trends and are not sensitive to short-term shifts in the business cycle.

The accuracy of small state forecasts tends to be hampered by the size of the forecast base (i.e., employment) and the historical context (urbanized-industrial) within which BLS methods and techniques develop. National forecast methodologies are structured around an industrial base that is substantially different from North Dakota's. Individual firm behavior (i.e., business failure due to poor management, individual/owner decisions to relocate a business, or energy conversion facility start-up) is, for all practical purposes, not relevant in national or state forecasts where the employment base is large. Where the employment base is large, individual firm decisions are presumed to be self-canceling relative to the economy or industry as a whole. But in North Dakota, where the state's population is smaller than each of 60 of the nation's cities, and employment in the state equals 0.3 percent of national employment, individual firm decisions can alter the accuracy of forecasts. Economic/demographic size factors mean that the behavior of a few large employers, or the well-being of a relatively narrow industry segment, can play a significant role in the future of some major occupational groups in North Dakota.

To a significant degree, forecast errors relating to the size of North Dakota's economy, and the two national problems of fragmented data sources for occupations beyond the Census Bureau's 417 limit and the ten-year observation dates used for forecasting purposes, can be overcome by the Occupational Employment Statistics (OES) program. The OES program is a federal/state cooperative program designed to conduct industry specific surveys of firms for the purpose of establishing a detailed occupational profile of the state and forecasting employment by occupation. The OES program surveys establishments to obtain systematic counts of jobs by occupational type, and then surveys each industry again after a period of (three to five) years. The less-than-ten-year interval between industry surveys is important to the maintenance of the currency of data for descriptive and forecast purposes. The focus in the questionnaires on jobs rather than persons means that OES data includes secondary as well as primary occupations and that the data are comparable to the job-related data described in Chapter V. In addition, the OES program achieves greater detail in preparing its occupational profiles, using a Census Bureau/Dictionary of Occupational Titles coding scheme.(44) Summary data from surveys conducted in North Dakota to date are presented in Table 18. A list of OES publications is presented in Part II of the Reference Section.

The problem of determining the statistical sensitivity of occupations in North Dakota to changes in the business cycle, and/or to normal seasonal trends, can be approached by referring to historical employment data for each industry (Table 8), forecast employment growth rates (Chapter V, Part E), and complementary OES data from Table 18. For example, the OES survey data in Table 18 indicates that an estimated 82.9 percent of jobs in the construction industry fall into the maintenance and production trades. It is not surprising

Table 18: Employment by Occupation and Industry; Summary of Occupational Employment Statistics (OES)

Industry, Year, and Quarter of Survey

																	Government [3]				
	Mining (1976:II)		Construction (1978:II)		Manufacturing (1978:II)		Trans, Comm, Public Util. (1976:II) [1]		Wholesale Trade (1976:II)		Retail Trade (1976:II)		Fin, Ins, Real Estate (1976:II)		Service [2] (1978:II)		Federal (1977:IV)		State/Local (1979:II)		Total Percent
Occupation	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Managers & Officers	130	5.0	1,695	7.7	1,094	7.2	1,038	10.2	2,046	11.3	4,208	9.6	2,138	23.1	2,200	7.4	1,229	12.4	10,160	19.9	12.0
Professional	111	4.3	452	2.1	802	5.3	882	8.7	449	2.5	1,166	2.7	616	6.7	3,369	11.3	2,331	23.5	17,859	35.0	13.0
Elem/Preschool Teacher	—		—		—		—		—		—		—		15		—		5,649		
Nurse, Registered	—		—		5		—		—		—		3		685		144		206		
Physician &/or Surgeon	—		—		—		—		—		—		—		395		44		32		
Announcer	—		—		—		169		—		—		—		—		—		—		
Technical	37	1.4	119	0.5	156	1.0	316	3.1	315	1.7	100	0.2	55	0.6	2,043	6.9	874	8.8	1,173	2.3	2.0
Bio Sci Technician	—		—		4		—		—		—		—		1		355		—		
Elec & Electronic Tech	2		34		7		150		267		8		—		367		54		9		
Services	16	0.6	237	1.1	357	2.4	116	1.1	434	2.4	13,454	30.8	566	6.1	12,886	43.2	568	5.7	6,587	12.9	17.0
Nurse Aide/Orderly	—		—		—		—		—		—		—		1,968		119		37		
Waiter/Waitress	—		—		—		—		14		5,099		—		1,568		—		—		
Kitchen Helper	—		—		—		—		—		1,075		—		936		—		1,486		
Food Service Worker	—		—		20		—		5		1,610		56		159		98		—		
Janitors, Port & Clean	11		216		300		95		374		874		244		2,812		113		1,870		
Maintenance & Production	2,147	82.7	18,123	82.9	10,500	69.4	5,090	50.0	7,428	41.1	9,449	21.6	197	2.1	3,637	12.2	1,503	15.2	6,506	12.8	31.0
Carpenter	1		2,815		43		—		196		96		27		62		56		40		
Heavy Equip Operator	290		1,729		48		17		—		—		—		—		106		432		
Truck Driver	206		796		736		1,454		910		591		19		30		79		321		
Line Installer Repairer	—		408		—		524		—		—		—		—		—		—		
Automotive Mechanic	60		110		98		56		1,111		1,585		—		132		85		117		
Stock Clerk, Sales Floor	—		—		—		—		—		1,382		—		—		31		—		
Aircraft Mechanic	—		—		—		17		—		—		—		—		87		—		
Bus Driver	—		—		—		213		—		—		—		12		—		1,977		
Motion Pic Project	—		—		—		—		—		—		—		238		—		—		
Clerical	148	5.7	1,130	5.2	1,578	10.4	2,497	24.5	4,541	25.1	6,333	14.5	4,530	49.0	5,262	17.6	3,379	34.1	8,665	17.0	18.0
Teller	—		—		—		—		—		—		1,169		—		—		—		
Postal Dist Worker	—		—		—		—		—		—		—		—		1,380		—		
General Clerk	28		342		307		78		946		715		331		524		—		1,510		
Secretary	28		256		218		227		283		153		441		1,044		188		1,978		
Telephone Operator	—		—		—		432		—		—		—		—		—		—		
Sales	6	0.2	118	0.5	652	4.3	245	2.4	2,881	15.9	9,033	20.6	1,151	12.4	408	1.4	33	0.3	12	>0.1	7.0
Sales Clerk	—		—		538		9		757		6,182		8		215		33		12		
Sales Agent/Rep	6		118		114		224		2,079		2,778		55		168		—		—		
Sales Agent/Insurance	—		—		—		—		—		—		922		—		—		—		
Total	2,595	99.9	21,874	100.0	15,139	100.0	10,184	100.0	18,094	100.0	43.743	100.0	9,253	100.0	29,805	100.0	9,917	100.0	50,962	99.9	100.0

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[1] Excludes Railroad Employees (SIC 40).

[2] Excludes Hospitals and Private Education (SICs 806 and 82, respectively).

[3] Includes Private Education (SIC 82).

then, that when construction employment fell by 13 percent between 1979 and 1980, it was accompanied by a nearly twofold increase in the supply as opposed to the demand for structural workers (see Appendix Table IIIb), and that 43 percent of job insurance claimants during 1980 were structural workers (see Table 19). Presently, however, analysis focusing on occupational supply and demand during different phases of the business cycle is limited to manual operations and lacks considerable theoretical and statistical refinement (see, for example, 45).

Table 19

The Insured Unemployed by Occupation

1980 (Annual Average) [1]

	N	%
Professional, Technical, Managerial	487	7.9
Service	386	6.3
Bench Work	143	2.3
Structural Trades	2,637	43.0
Machine Trades	306	5.0
Processing	148	2.4
Clerical	533	8.7
Sales	291	4.7
Agriculture, Fishing, Forestry	153	2.5
Miscellaneous Occupations	1,051	17.0
Information Not Available	1	<0.1
Total	6,136	100.0

[1] Excludes UCFE and UCX (federal civilian and military unemployment insurance claimants)

D. Summary

Under present forecasting techniques, occupational forecasts flow from forecasts of the demand for goods and services. In a simple form, one might forecast the value of new construction, determine the historical relationship between the value of new construction and the level of construction employment, and assume that the staffing pattern in construction will remain constant over the course of the forecast period. In practice, at the national level, value is forecast in terms of GNP for each industry. State level industry/occupational forecasts are measured in terms of the historical proportion of state level employment to national employment. Present forecast techniques then, reflect an attempt to measure historic industry staffing patterns and to extend these relationships into the future under circumstances of novel demand-related employment growth.

National projections show a strong growth in clerical and service occupational fields with North Dakota's pattern of occupational growth becoming more like the national staffing pattern.

Occupational forecasts are more accurate at grosser levels of occupational aggregation. It is, for example, assumed that employment growth among engineers at the national level can be predicted more accurately than can the growth in the number of a specific type of engineer at the local level. Projection difficulties become greater the more narrow the geographic/skill definition. At the same time, the consequences of the failure to forecast, or to attempt to understand forecast techniques, and act intelligently on the basis of those forecasts, are reasonably well documented by the media. Shortages, escalating salaries, and intense competition among firms for nursing, programming, and engineering occupations have become fairly well-known. At a time when unemployment is high, industrial growth is impeded by occupational shortages. In exaggerated terms, these are problems that emerging, third world nations face. One of the major tools in the developing nations approach to economic development is occupational forecasting.

VII. MANPOWER SERVICES, SELECTED POPULATION SEGMENTS, AND THE UNEMPLOYED

A. Introduction

The purpose of this chapter is to outline the characteristics of those segments of the population served by Job Service and/or the characteristics of those for whom Job Service and companion agencies (e.g., Social Services) share a responsibility. Population segments for whom one or more programs exist include the unemployed, veterans, and individuals in poverty. We do not intend to be exhaustive in our description of the clientele served by Job Service. Another publication, the Annual Report, describes job placement, counseling, and other services provided to a broad range of individuals. The Annual Report also describes the programs in which Job Service participates with other state agencies, details the current work history of the Job Insurance Division, and outlines some of the statistical programs operated in partnership with the Bureau of Labor Statistics.

The Annual Report provides information on individuals served by Job Service North Dakota. Data concerning other clients (for example, the number of businesses and governmental entities using Job Service as a hiring or referral resource) are presently unavailable. However, the point can be made that manpower services represent, at least partly, a community service. One method of assessing the scope of this service is to note that the 32,110 individuals placed during Fiscal Year 1980 (Table 24) represent 4.9 percent of the state's population or 9.7 percent of the labor force. From an economic standpoint, if each individual placed in a job (and 71.9 percent of all placements were in jobs of five months or more) worked for one month and earned the average monthly earnings (1979, Table 10), the total gross earnings for those placed would amount to nearly $30 million. Manpower services, then, have substantial economic and social consequences for the persons, employers, and communities served.

B. Unemployment

Unemployment refers to the number of persons aged 16 and over who are not working but who are looking for work.[1/] The unemployment rate, or the proportion of the labor force not working (expressed as a percentage), is a measure of labor market performance. The data in Table 12, for example, documents the deterioration of the labor market from 1979 to 1980. In this one year period, unemployment grew from an annual average of 13,060 to 16,360 persons, and growth in the number of employed slid from 2.8 percent to 0.4 percent. "Labor market performance measures are distinguished from indices of economic hardship, which provide an indication of economic well-being."(19:2) Although jobs and income are related, the relationship between them is so ill-defined under current statistical programs that only highly aggregated uses of employment data to make inferences about income, seem warranted. For example, the data in Table 11 indicates that 78.5 percent of the personal income (prior to social insurance deductions) in the state is derived from wage and salary disbursements. Clearly then, the observation can be made that job-related income is the most important source of personal income. However, as is illustrated in Table 10, job-related income differs by 172 percent from the lowest to the highest paying industry average. Given no other information, a knowledge of jobholding or non-jobholding tells us little about the extent of economic well-being among the people of an area.

Jobholding by itself gives us little indication as to where an individual stands in terms of poverty. An individual employed in the retail trade industry during 1979, earning the average earnings for the industry ($7,104), and being the sole provider in a nonfarm family of five, would have been a member of a family in poverty (see Table 23 for poverty income levels). An individual working a full year for the average earnings in the services industry would have had an income of $8,784, or an income that was 17.9 percent above the

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[1/] Unemployment--the number of persons who for an entire week did not work at all, were able to work and available for work, and (1) were looking for work; or (2) would have looked for work except that (a) they were waiting to return to a job from which they had been laid off; or (b) they were waiting to report to a new wage and salary job scheduled to start within the following 30 days (and were not in school during the week).

poverty level for a nonfarm family of four in 1979. Without a method of linking employment to household income, the unemployment rate can only be viewed as a measure of labor market performance.

However, it is clear that job holding is the primary source of income for the majority of people. The traditional response in North Dakota of the unemployed to a lack of job opportunities has been the out-migration of individuals unable to find work. After reviewing preliminary statistics from the 1970 Census, Voelker in 1971 stated: "Part of the manpower withdrawn from agriculture has found employment in the manufacturing and service sectors of North Dakota's economy . . . but most of this manpower simply migrated from the state."(49:9) From 1960 to 1970, North Dakota experienced a net out-migration of 94,900 adults and their children. During the past decade, net out-migration is estimated at nearly 17,500. But because family size has diminished and the average age of the population has risen over the past ten years, it is suspected that a larger proportion of current out-migration, than the 1960-1970 out-migration, is among jobless young adults.

On the other hand, there are other differences between the two decades that may have affected the rate of unemployment-related outmigration and the workload of Job Service. Historically, rural-to-urban migration and the movement of agricultural self-employment into wage and salary employment has increased the importance of agency-related job referral to a smoothly functioning economy. Over the same historical period, the job insurance (JI) program expanded to cover a larger proportion of wage and salary employment. Job insurance coverage during periods of temporary job loss may also be thought of as a means of slowing out-migration among the state's skilled, but temporarily unemployed, labor force. A reduction in the relative importance of self-employment and the relatively rapid rise in the number of wage and salary jobs, the use by job seekers and employers of Job Service's referral services, and the expansion of job insurance coverage, can be thought of as interrelated processes slowing the rate of out-migration during the 1970s.

Table 20
Job Insurance Coverage & the Unemployed
1980 Annual Average

	Number	Percentage
Job Insurance Covered Claimants	6,334	38.7
Job Insurance Benefit Exhaustees	1,695	10.3
Job Insurance Delayed and Never Filers	1,864	11.4
New and Re-Entrants to the Labor Force	4,853	29.7
Noncovered and Other	1,614	9.9
Total	16,360	100.0

For a substantial number of the unemployed during 1980, unemployment meant a short-term reduction in income rather than a total absence of income. The data in Table 20 indicates that 38.7 percent of those unemployed on a monthly average basis, were recipients of income under job insurance coverage. In addition, on a monthly average basis a great deal can be learned about the industry and occupation of last employment, (to a limited extent) the duration of unemployment, and the demographic characteristics of the insured unemployed (see Tables 19, 20, 21, and Appendix Table IVa). The insured unemployed represent the vast majority of experienced non-agricultural job losers. And as shown in Table 21, most job losers (69.7 percent) were concentrated in three industries: construction, manufacturing, and trade. With more than one-third of all job loss occurring in the traditionally male-dominated construction industry, most job losers during 1980 were males (77.2 percent). Table 22 shows that 62.5 percent of male job losers were between the ages of 16 and 34. But with over half of all female JI claimants being under the age of 35 (54.2 percent), the relationship between age and likelihood of job loss cannot be viewed as an exclusively male-related problem. Finally, as is shown in Appendix Table VIa, both males and females tended to remain JI claimants for about the same length of time; over 49 percent of each population segment remained a claimant for 5 to 14 weeks.

On an annual average basis in 1980, 70.3 percent of the unemployed had lost their jobs and 29.7 percent of the unemployed were individuals entering the labor market for the first time, or after a period of absence. Among job losers, 6,334 were job insurance claimants; 1,695 people were exhausting their job insurance claims benefits; 1,864 people would fail to file a claim for the benefits to which they were entitled; and an additional 1,614 would be leaving jobs with no legitimate claim on job insurance funds. As has been noted above, a considerable amount of information is available on job insurance claimants (the 38.7 percent of all unemployed), or individuals who have at least some verifiable income during part, if not all, of their unemployment.

A substantial proportion of the remaining, or 61.3 percent of the unemployed, may have had income from other sources or have resided in families with income. The data in Table 6 shows that the highest unemployment numbers and rates are among those between the ages of 16 and 24. With 47.7 percent of the unemployed between the ages of 16 and 24, almost half the unemployed are at the lowest stage in their earnings career. The economic loss associated with unemployment may be viewed with less concern than the psychological, social, demographic, and ultimately, political consequences of unemployment.(48)

The Appendix statistics also allows the point to be made that unemployment is a seasonal and localized phenomenon. For example, the data in Appendix Tables IVe and IVf, for January and October of 1980, illustrate the seasonal swing in unemployment during the year. In January of 1980, unemployment was estimated at 19,105, and in October there were 12,828 unemployed in the state--a 48.9 percent unemployment swing.

Contrasting the January to October 1980 unemployment statistics from Appendix IV shows that while the aggregate seasonal swing in unemployment amounted to 48.9 percent, unemployment in the state's eight planning regions did not respond equally to the situation. Region V had 19.2 percent more, and Region VI had 24.2 percent less unemployment than one would have statistically expected given the aggregate rate of change in unemployment. The difference between the estimated number of unemployed and the statistically expected number of unemployed (a technique demonstrated in Table 16) for all other

Table 21
The Insured Unemployed by Sex and Industry of Last Employment
1980 Annual Average

	Sex					
	Male		Female		Total	
Industry	N	%	N	%	N	%
Agriculture	119	76.7	36	23.3	156	2.5
Mining	108	92.7	9	7.3	117	1.8
Construction	2,195	96.0	92	4.0	2,287	36.1
Manufacturing	727	73.2	266	26.8	993	15.7
Transportation, Communication, and Public Utilities	211	81.2	49	18.8	260	4.1
Wholesale and Retail Trade	732	64.5	402	35.5	1,134	17.9
Finance, Insurance, and Real Estate	32	43.2	42	56.8	74	1.2
Services	204	43.9	261	56.1	465	7.3
Other	319	60.9	205	39.1	524	8.3
INA	243	74.7	82	25.3	325	5.1
Total	4,890	77.2	1,444	22.8	6,334	100.0

Table 22
The Insured Unemployed by Sex and Age
1980 Annual Average

	Sex					
Age	Male		Female		Total	
	N	%	N	%	N	%
16-24	1,461	30.8	367	26.3	1,828	29.8
25-34	1,506	31.7	389	27.9	1,895	30.9
35-44	618	13.0	210	15.1	828	13.5
45-54	498	10.5	183	13.1	681	11.1
55-64	437	9.2	130	9.3	567	9.2
65	103	2.2	21	1.5	124	2.0
INA	122	2.6	93	6.7	215	3.5
Total	4,745	100.0	1,393	99.9	6,138	100.0
Row %	77.3		22.7		100.0	

Data includes regular JI claimants but excludes federal civilian government and military unemployment.

regions was less than 9 percent. Thus, while all regions of the state are affected by seasonal, weather-related trends in unemployment, regions respond to the change at different rates than the state as a whole.

Seasonal differences in unemployment depend upon the industry/labor force/weather mix in a given region with the emphasis being on weather in explaining over-the-year changes. Unemployment changes from year to year, however, appear to be more thoroughly explained by the industry mix of a given area. All three factors play a role in interpreting 1979-1980 annual average unemployment statistics. County level annual average data for 1978-1980 can be used to document the influence of drought/recession on local unemployment.

The estimated number of unemployed during 1980 was 16,360. However, the 25.3 percent increase in unemployment was not evenly distributed across the state's localities. Unemployment increased in each region of the state. But, as analysis of Appendix Tables IVc and IVd shows, unemployment increased at a pace that was from 11.7 to 7 percent below what would have been statistically expected in Regions II, III, and IV. In addition, the rate of unemployment growth was even slower in Regions I and VIII, at 16.4 percent and 22 percent respectively, below where it should have been if unemployment in these regions had grown as rapidly as it had in the state. The number of unemployed grew at a rate very near the expected rate of unemployment growth in Region VI, grew at 4.8 percent above the statistically expected rate in Region V, and at 16.1 percent above the expected rate in Region VII.

The structure of employment in Regions V and VII during 1979 was weighted very heavily toward those industries (construction, manufacturing, and trade) responsible for more than two-thirds of the covered unemployment in 1980 (Table 21). The proportion of wage and salary employment in trade, at 33.3 percent in Region V and 25.8 percent in Region VII, stood well above the state total at 23.5 percent (see Appendix Table IIg, 1979). Moreover, Region V had a greater proportion (11.2 percent) of its employment in manufacturing than was the case statewide (7.5 percent), and Region VII had a greater proportion of its employment (13.8 percent) in construction than was the case statewide (8.3 percent). Unemployment in Regions V and VII grew more rapidly than could have been statistically expected, in part, because a greater proportion of local employment was found in industries sensitive to the drought/recession of 1980. Year-to-year changes in local unemployment can quite clearly be related to the local industrial mix and the sensitivity of an area's industrial mix to externally imposed economic conditions.

Although a great deal of data is available on unemployment and the unemployed, there are substantial gaps at the elementary knowledge level about both. The available (CPS) sample-based measures of unemployment and labor market participation, and internally-generated records concerning the employed and unemployed, tell us little about the number of different people experiencing unemployment during a year, the duration of unemployment, nor how many people were forced from their jobs, and after a fruitless search for work, left either the labor market, the state, or both. It can be noted, based on the data in Table 12, that the number of individuals unemployed rose on an annual average basis by 25.3 percent from 1979 to 1980. However, this observation could lead either to the conclusion that large numbers of people were unemployed for short periods of time, or that fewer people were unemployed for lengthier periods of time. It cannot necessarily be concluded that more persons were unemployed during 1980 than 1979. Another approach to estimating how many different persons were without work, and their characteristics, would be to review internally-generated data on the number of individuals using Job Service local offices as part of their job search activity. However, individuals counted under the definition "not working" in Table 24, may include individuals seeking counseling, training, or some service other than job referral; therefore, the "not working" definition fails to satisfy the BLS definition of unemployment (Footnote 1). How many different individuals lost their jobs during 1980, how many different people who were not working entered the labor market, and how long either population segment was unemployed, are three questions that are not presently answerable.

C. The Economically Disadvantaged and Other Population Segments

Labor market measures refer to the number of jobs available and the number of individuals seeking work. The concept of economic well-being, on the other hand, refers to the distribution of income among families. Although, at aggregate levels, there is a functional relationship between jobs and personal income, employment may not guarantee an income above the official poverty level.[2/] Indeed, the unknown size of the working poor population may be one reason there is no clear, direct relationship between labor market measures and indices sensitive to the number of those who are in poverty.

Labor force measures would probably be better predictors of economic well-being if access to labor market and job-related income were not affected by the social and demographic characteristics of individuals in the labor force. In part, recognition of this problem at the federal level, and an emphasis on service to veterans, has meant that Job Service provides special program emphasis for those population segments identified in Table 24. "Placements in jobs of 150 days or more," for example, are one indication of barriers to employment opportunities.[3/] The distribution of placements of 150 days or more shows that long-term placements are disproportionately difficult to make for those in poverty, those receiving welfare, American Indians, Asians, those aged 55 and over, and the mentally retarded. Hispanics, seasonal farmworkers, and those under age 18 also have 150 day placement rates below 71.9 percent. But these individuals are frequently seeking jobs spanning only the summer months, making long-term placements the exception rather than the rule. Whether or not barriers to long-term placement are a function of circumstances preceding the labor market (e.g., at the school system level), related to geographic barriers to employment, or are a

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[2/] For information concerning the historical development of the measure of poverty found in Table 23, and state and local estimates of the number of those below the poverty level, see the July 1980 Research and Statistics publication, "Poverty in North Dakota: Estimates of the Number of Economically Disadvantaged 1979." The statistics in Appendix Tables IVg, IVh, and IVi are published as an update to that study.

[3/] A systematic study of labor market access of various social and demographic population segments would rely upon several measures of barriers to jobs and job quality.

Table 23
Poverty Income Levels by Family Size
1979-1981

Family Size	1979 Nonfarm	1979 Farm	1980 Nonfarm	1980 Farm	1981 Nonfarm	1981 Farm
1	$3,400	$2,910	$3,790	$3,250	$4,310	$2,680
2	4,500	3,840	5,010	4,280	5,690	4,850
3	5,600	4,770	6,230	5,310	7,070	6,020
4	6,700	5,700	7,450	6,340	8,450	7,190
5	7,800	6,630	8,670	7,370	9,830	8,360
6	8,900	7,560	9,890	8,400	11,210	9,530

Additional dollar amounts are added for each family member in families of seven or more.

function of economic and socio-political processes in the labor market itself, access to jobs and job-related income are not exclusively a function of the economic characteristics of individuals in the labor market.

The economically disadvantaged are one of the primary population segments to participate in training and job development programs offered through Job Service (see, in particular, Appendix Table IVi). The official poverty line is a family size by income measure and is provided as Table 23. The poverty line, updated once a year on the basis of movement in the Consumer Price Index (CPI), is used by the Census Bureau in their annual Current Population Survey to create national estimates of the number of individuals in poverty, and is a major criteria in determining eligibility for most CETA programs. Variations on the measure are also an element in determining eligibility for the Food Stamp, Aid to Families with Dependent Children, school lunch food and nutrition, and other programs. While poverty may be measured in terms of 12 months of sustained low income, and updated with the CPI on an annual basis (such as is the case in Table 23), other programs use a monthly income criteria (1/12th of the annual income in Table 23) and raise the poverty level more often than annually. Biannual indexing of the Food Stamp Program was the rule until mid-1980 when the Carter Administration decided to cut costs by indexing the poverty guidelines only once rather than twice a year. Eligibility standards in the Food Stamp Program for the current month's eligibility, however, are still determined from a monthly income derivation of the annual poverty income. Because eligibility for the program is determined on a monthly basis, participation statistics related to the Food Stamp Program are more sensitive to the movement of families into and out of poverty on a seaonal basis than are statistics (such as those found in Table 24 and Appendix Tables IVh and IVi) derived from programs requiring twelve months of sustained low income for eligibility.

Since participation in the Food Stamp Program is predicated on criteria related to the economic well-being of families, a comparison of labor market performance indices with program participation indices should allow us to determine whether or not labor market and poverty measures are a reflection of the same phenomenon. Using data from Appendix IV, a comparison of statistically expected as opposed to actual increases in food stamp participation, 4/ with changes in the annual average number of unemployed by region for 1979 to 1980, proved inconclusive. In four of eight planning regions, unemployment and

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4/ First quarter average food stamp utilization (Appendix Table IVg) is used to create an estimate of economic well-being because during other quarters food stamp utilization in certain parts of the state, far more than labor market measures, is strongly affected by the migration of seasonal farmworkers. In addition, from a theoretical standpoint, employment and employment-related income (Appendix Tables IIb and IIc) are at their lowest levels during the first quarter of the year. If the economic well-being of the population, measured in terms of food stamp participation, is related to jobs and job-related income, first quarter data should provide us with an obvious example of the relationship.

The participation of the unemployed in the Food Stamp Program may be important to only a small segment of all unemployed. Even for those who use the program, utilization may not occur in the same quarter of job loss or in the first quarter of renewed job search. Job insurance benefits, for example, would delay the eligibility of many unemployed and their family members until the second quarter of 1980. However, during the second quarter, migrant farmworker participation in the Food Stamp Program forces a substantial rise in program participation that is quite independent of the number of unemployed. Clearly, many of those receiving food stamps are also searching for work or have dropped out of the labor market. How many individuals fall into these two categories is uncertain, but it would appear that the problem of the relationship between unemployment statistics, food stamp participation, other measures of economic well-being, and as suggested in Part B, out-migration, would appear to warrant further study.

food stamp participation followed in the same direction. In the other four planning regions, unemployment and food stamp participation failed to keep pace with each other. For example, in Planning Region VII, where unemployment increased at a rate far faster (see Section B of this chapter) than one would statistically expect, given the increase in the number unemployed on a statewide basis, food stamp utilization increased at a pace (10.9 percent) slower than the statewide rate of increase in participation. In summary then, although labor market activity is related to personal income, labor market statistics cannot be used as a proxy measure of economic well-being.

From 1970 to 1979, the number of North Dakotans in poverty declined from 93,086 to an estimated 71,860, or from 15.3 percent to 11.1 percent of the civilian population. Since poverty is measured in terms of income and family size, the total number of those in poverty can be decreased by holding income constant and reducing family size, by holding family size constant and increasing income, or by simultaneously increasing income and reducing family size (or by the outmigration of the poor). The available data suggests that over the past ten years both have happened; average family size has become smaller and there has been an increase in aggregate personal income.[5/] Smaller families and higher incomes would appear to be the product of the maturing of the population, and a labor force that grew 2.7 times faster than the population. In one sense, it can be suggested that the poor and near poor children counted in the 1970 Census became the young working adults and the second wage earner in the family of the late 1970s and early 1980s.

D. Summary

Job Service North Dakota is charged with the responsibility of meeting a legislatively-defined need to serve the unemployed, poor, handicapped, veteran, and others. The unemployed and those in poverty form the bulk of the special population segments served.

[5/] Although the evidence is indirect, the data are fairly convincing on both issues. Per capita personal income in constant dollars rose by 31 percent from 1970 to 1980 while the number of persons per housing unit declined from 3.01 persons to 2.5 persons (see Table 3).

Even though the labor market is the primary avenue of escape from poverty for a substantial number of individuals, labor market measurement appears to be poorly adapted to drawing inferences about the economic well-being of the population. Labor market measures fail to give us a clear picture of economic well-being because, as we have shown in other publications, a substantial number of those in poverty are either too old or too young to participate in the labor market. Moreover, except at very aggregate levels, jobholding tells us little about personal income and nothing about family income. In effect, the working poor are measured the same way as the middle income and upper income earner in local labor market statistics.

At the national level, annual use of the Current Population Survey (CPS) to estimate the number of those in poverty ". . . is used to measure the nation's progress in reducing the extent of poverty. It is also used as a statistical tool to identify the target populations of government programs that help the financially needy and to evaluate the effectiveness of such programs."(50:xxi) Lacking the resources to conduct household surveys for the purpose of manpower planning for the poor, the states must rely upon estimating techniques (using administrative records) in which the level of error cannot be estimated. While less than satisfactory, the administrative records in the Appendix, along with Census Bureau information for certain years, forms the basis for making inferences about the numbers, characteristics, and therefore, processes, contriving to bring about poverty. With knowledge of the drawbacks associated with the administrative records approach to estimating the number of persons in poverty, local manpower planners have an additional tool that can be used in a creative approach to manpower planning.

The available administrative records on the poor, when interpreted within the context of population, labor force, and income data, suggest that certain historic economic and demographic processes have served to reduce the number of those in poverty. These major processes, operating over the past ten years, would appear to include a broadening of labor force participation to a greater proportion of women and youth, a lower birthrate, fewer children per family, and an increased number of jobs. Any factor that impedes the development of these processes, such as high interest rates, either temporarily or over-the-long-term, are also likely to be associated with an increase in the number of poor. As our population matures over the decade of the 1980s, we may find fewer and fewer persons in poverty as the supply of youth entering the labor market declines and, until large numbers of the baby boom generation begin to reach retirement age.

Table 24
Social and Demographic Characteristics of Individuals Placed in Jobs by Job Service Local Offices
Fiscal Year 1980 (10/1/79-9/30/80)

	Applicants Placed		Placed In Jobs Over 150 Days	
	N	%	N	%
Total	32,110	100.0	23,071	71.9
Age				
15 and under	1,936	6.0	570	29.4
16-17	3,807	11.9	2,278	59.8
18-19	5,269	16.4	3,825	72.6
20-21	4,681	14.6	3,609	77.1
22-24	5,487	17.1	4,510	82.2
25-29	4,534	14.1	3,620	79.8
30-34	2,336	7.3	1,769	75.7
35-39	1,290	4.0	957	74.2
40-44	912	2.8	676	74.1
45-54	1,144	3.6	792	69.2
55-64	556	1.7	365	65.6
65 and over	158	0.5	95	60.1
Sex				
Male	17,369	54.1	11,785	67.9
Female	14,741	45.9	11,286	76.6
Race/Ethnicity				
White (not Hispanic)	28,687	89.3	21,557	75.1
Black (not Hispanic)	211	0.6	152	72.0
Hispanic	1,091	3.4	125	11.5
American Indian	1,861	5.8	1,061	57.0
Asian & Pacific Islander	164	0.5	109	66.5
INA	96	0.3	67	69.8
Veteran	4,055	12.6	2,978	73.4
Recently Separated	1,611		1,205	74.8
Disabled	205		156	76.1
Vietnam Era	2,036		1,541	75.7
Special Veteran	652		496	76.1
Handicapped	2,286	7.1	1,660	72.6
Physically Disabled	1,751		1,314	75.0
Mentally Retarded	207		114	55.1
Mentally Restored	328		232	70.7
Economically Disadvantaged	6,202	19.3	3,319	53.5
Welfare	973	3.0	608	62.5
Seasonal Farmworker	1,019	3.2	170	16.7
Employment Status				
Employed Full Time	3,427	10.7	2,945	85.9
Employed Part Time	2,458	7.6	1,880	76.5
Not Working	26,225	81.7	18,246	69.6

ESARS Table 3: ESARS (Employment Security Automated Reporting System) excludes individuals for whom no service was rendered and the job attached. The job attached are job insurance claimants who were not working at the time of application but who expect to return to their former employer.

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Appendices

Appendix I: Physical Description of the State

A. Topography

North Dakota has a total area of 70,665 square miles, less than 2 percent of which is covered by water. As a plains state, differences in elevation are minimal. Elevation in the northeast corner of the state is 750 feet above sea level and 3,506 in the southwest corner of the state.

Approximately two-thirds of North Dakota's topography reflects the activity of recent glaciation (13,000 years ago). Recent glacial activity formed the surface features of the central lowlands and the glacier's retreat towards Hudson Bay had the major result of establishing a large lake in the eastern portion of the state. The sediment deposits from this lake formed the Red River Valley. Consequently, there are three distinct regions in the state.

Figure Ia: Map of Main Topographic Areas in North Dakota

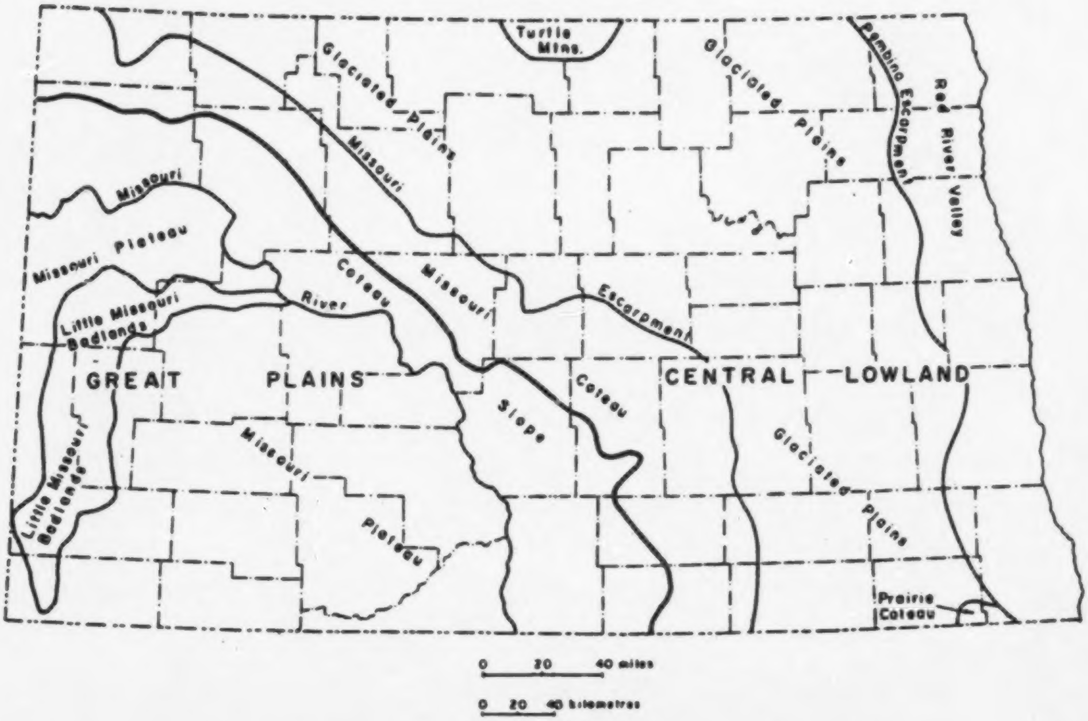


Figure 1. Map showing the main topographic areas in North Dakota. The term "gently sloping" refers to areas that have slopes of less than 8 percent (4° 35'). Local relief is defined as the maximum difference in elevation within any township-sized area.

Source: John P. Bluemle, The Face of North Dakota; The Geologic Story; Educational Series 11, 1977, North Dakota Geological Survey.

In the east, the Red River Valley is extremely flat and presents relatively few natural impediments to agricultural activity. Moreover, topsoil depth is consistently greater in this region than in any part of the state.

Gently rolling hills characterize the glaciated plains in the central area of the state. Topsoil depths are less than in the Red River Valley with agricultural uses limited by a rockier soil and a large number of sloughs and potholes.

The Missouri Coteau was the termination point of the last glacier and west of this area is the Missouri Plateau. This area is comprised of more deeply sloped hills than is characteristic of the central plains. Fewer sloughs are found in this area, and stream and river courses in some places have formed badlands and badlands-like features.

B. Climate

With an average growing season length of 120 days and average growing season rainfall of 13 inches, North Dakota's climate is particularly conducive to the growing of grains. Because of the state's proximity to its primary moisture supply (the Gulf of Mexico), rainfall decreases across the state from southeast to northwest. Likewise, the longest frost-free period is found in the southeastern part of the state. As expected then, the premier farming area is located in the eastern part of the state, gradually displaced by ranching toward the west. Relatively low growing season temperatures are also beneficial for the development of grain.

Difficulties associated with farming in North Dakota exist because of the uncertainty of receiving average precipitation or the relatively high probability of drought. North Dakota is located in the semi-arid plains of the Northern Hemisphere where storm patterns are erratic. Spring storms, which form in the southwestern United States and move northeast, can lead to wet conditions which delay spring planting. High summer temperatures may prematurely ripen crops, lowering quality and yield.

In summary, annual average precipitation, topography, and topsoil characteristics create three major and distinct regions within the state. These ecological relationships have had a major impact on North Dakota's basic industry, institutions, and population.

Figure Ib: North Dakota Weather Data; Growing Season and Precipitation

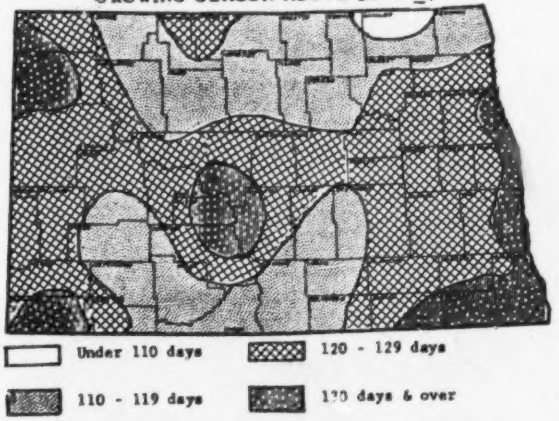
PRECIPITATION, MEAN TEMPERATURE AND DEPARTURES,
NORTH DAKOTA, APRIL-SEPTEMBER 1979

Month	Precipitation	Departure	Mean Temperature	Departure
	(Inches)	(Inches)	(Degrees F)	(Degrees F)
April	2.08	+ .61	33.5	- 7.9
May	1.61	- .74	48.8	- 4.6
June	2.32	-1.40	64.0	+ 1.3
July	2.94	+ .36	70.0	+ .7
August	1.51	- .79	65.5	- 2.5
September	.81	- .89	60.2	+ 3.6

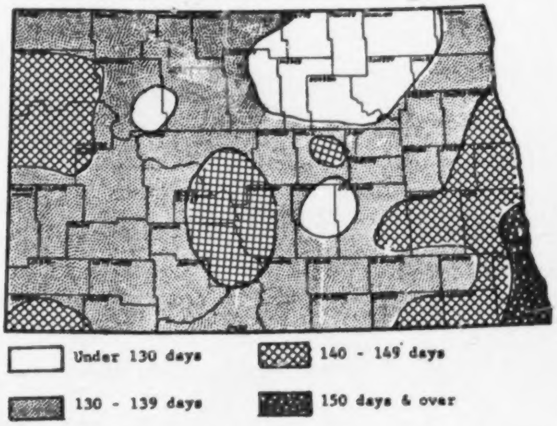
DAYS MAXIMUM TEMPERATURES REACHED 90° OR MORE
AT MAIN NORTH DAKOTA WEATHER STATIONS
JUNE 1 THROUGH AUGUST 31

Station	1976	1977	1978	1979
	- - - - Number of Days - - - -			
Fargo	24	8	8	8
Bismarck	33	9	12	14
Williston	15	9	12	12
Dickinson	18	8	9	10

LONG-TERM AVERAGE NUMBER OF DAYS IN
GROWING SEASON ABOVE 32° F 1/

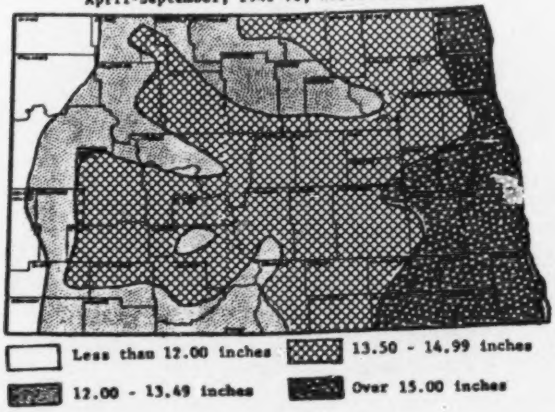


LONG TERM AVERAGE NUMBER OF DAYS IN
GROWING SEASON ABOVE 28° F 1/

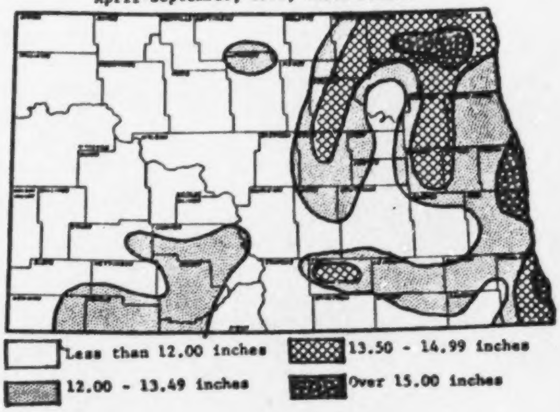


1/ Based on data for selected stations. Number of years used in average ranges by station from 26-78 years.

AVERAGE GROWING SEASON PRECIPITATION (Inches),
April-September, 1941-70, North Dakota



ANNUAL GROWING SEASON PRECIPITATION (Inches),
April-September, 1979, North Dakota



Source (1)

Table Ia: SCHOOL CENSUS POPULATION CHANGE
AGES 0-17 BY COUNTY 1977-1979

	5/31/77			8/31/79			1977-1979	
	AGE			AGE			TOTAL CHANGE	
	0-5	6-17	Total	0-5	6-17	Total	N	%
1. Williams	1,910	4,513	6,423	2,027	4,335	6,362	-61	-1.0
Divide	287	691	978	254	593	847	-131	-13.4
McKenzie	574	1,307	1,961	605	1,370	1,975	14	0.7
REGION I TOTAL	2,771	6,591	9,362	2,886	6,298	9,184	-178	-1.9
1977-1979 N & % Change	115	-293	178	4.2	-4.4	-1.9		
2. Ward	6,364	12,877	19,241	5,623	11,699	17,322	-1,919	-10.0
Bottineau	750	2,038	2,788	740	1,907	2,647	-141	-5.1
Burke	324	910	1,234	297	789	1,086	-148	-12.0
McHenry	677	2,135	2,812	662	1,810	2,472	-340	-12.1
Mountrail	757	1,890	2,647	704	1,713	2,417	-230	-8.7
Pierce	513	1,632	2,145	508	1,456	1,964	-181	-8.4
Renville	334	915	1,249	321	832	1,153	-96	-7.7
REGION II TOTAL	9,719	22,397	32,116	8,855	20,206	29,061	-3,055	-9.5
1977-1979 N & % Change	-864	-2,191	-3,055	-8.9	-9.9	-9.5		
3. Ramsey	963	2,838	3,801	974	2,618	3,592	-209	-5.5
Benson	627	1,876	2,498	533	1,496	2,029	-469	-18.8
Cavalier	604	1,801	2,405	553	1,537	2,090	-315	-13.1
Towner	271	904	1,175	251	770	1,021	-154	-13.1
Eddy	277	721	998	285	633	918	-80	-8.0
Rolette	1,505	3,721	5,226	1,466	3,393	4,859	-367	-7.0
REGION III TOTAL	4,242	11,861	16,103	4,062	10,447	14,509	-1,594	-9.9
1977-1979 N & % Change	-180	-1,414	-1,594	-4.2	-11.9	-9.9		
4. Grand Forks	5,919	12,078	17,997	5,379	11,746	17,125	-872	-4.8
Nelson	430	1,483	1,913	395	1,218	1,613	-300	-15.7
Walsh	1,178	3,250	4,428	1,096	2,987	4,083	-345	-7.8
Pembina	965	2,470	3,435	954	2,217	3,171	-264	-7.7
REGION IV TOTAL	8,492	19,281	27,773	7,824	18,168	25,992	-1,781	-6.4
1977-1979 N & % Change	-668	-1,113	-1,781	-7.9	-5.8	-6.4		
5. Cass	6,575	15,961	22,536	6,727	14,908	21,635	-901	-4.0
Traill	897	2,104	3,001	823	2,018	2,841	-160	-5.3
Steele	233	646	879	240	586	826	-53	-6.0
Ransom	606	1,471	2,077	588	1,350	1,938	-139	-6.7
Richland	1,386	3,412	4,798	1,442	3,031	4,473	-325	-6.8
Sargent	516	1,203	1,719	471	1,085	1,556	-163	-9.5
REGION V TOTAL	10,213	24,797	35,010	10,291	22,978	33,269	-1,741	-5.0
1977-1979 N & % Change	78	-1,819	-1,741	0.8	-7.3	-5.0		
6. Stutsman	1,816	4,688	6,504	1,871	4,404	6,275	-229	-3.5
Wells	559	1,657	2,216	528	1,486	2,014	-202	-9.1
McIntosh	274	1,206	1,480	273	974	1,247	-233	-15.7
Logan	262	832	1,094	230	747	977	-117	-10.7
Foster	390	1,192	1,582	329	1,100	1,429	-153	-9.7
Dickey	628	1,501	2,129	657	1,436	2,093	-36	-1.7
LaMoure	538	1,612	2,150	568	1,412	1,980	-170	-7.9
Barnes	902	2,742	3,644	916	2,514	3,430	-214	-5.9
Griggs	278	660	938	265	582	847	-91	-9.7
REGION VI TOTAL	5,647	16,090	21,737	5,637	14,655	20,292	-1,445	-6.6
1977-1979 N & % Change	-10	-1,435	-1,445	-0.2	-8.9	-6.6		
7. Burleigh	4,696	10,831	15,527	4,691	10,579	15,270	-257	-1.7
McLean	1,080	2,753	3,833	1,171	2,805	3,976	143	3.7
Sheridan	181	550	731	153	440	593	-138	-18.9
Kidder	362	905	1,267	330	797	1,127	-140	-11.1
Emmons	504	1,768	2,272	432	1,547	1,979	-293	-12.9
Morton	2,438	5,796	8,234	2,555	5,542	8,097	-137	-1.7
Mercer	578	1,502	2,080	752	1,712	2,464	384	18.5
Oliver	174	449	623	212	454	666	43	6.9
Grant	327	963	1,290	300	829	1,129	-161	-12.5
Sioux	509	1,263	1,772	443	1,080	1,513	-259	-14.6
REGION VII TOTAL	10,849	26,780	37,629	11,029	25,785	36,814	-815	-2.2
1977-1979 N & % Change	180	-995	-815	1.7	3.7	-2.2		
8. Stark	1,727	4,933	6,660	1,954	4,847	6,801	141	2.1
Slope	49	156	205	61	147	203	-2	-1.0
Hettinger	377	1,282	1,659	336	1,104	1,440	-219	-13.2
Golden Valley	234	571	805	209	494	703	-102	-12.7
Dunn	332	950	1,282	311	817	1,128	-154	-12.0
Bowman	451	1,049	1,500	421	1,000	1,421	-79	-5.3
Billings	101	306	407	90	264	354	-53	-13.0
Adams	300	771	1,071	291	680	971	-100	-9.3
REGION VIII TOTAL	3,571	10,018	13,589	3,673	9,348	13,021	-568	-4.2
1977-1979 N & % Change	102	-670	-560	-2.9	-6.7	-4.2		
STATE TOTAL	55,504	137,815	193,319	54,257	127,885	182,142	-11,117	-5.8
77-79 N & % Change	-1,247	-9,930	-11,177	-2.2	-7.2	-5.8		

SOURCE: North Dakota Educational Directory 1978-1979 and 1979-1980, Department of Public Instruction, Bismarck, North Dakota.

Table Ib: Social Security Beneficiaries Age 65+ by Age, Sex, Race/Ethnicity, and County, December 31, 1979

	Sex		Age		Race/Ethnicity		Total	
	Male	Female	65-74	75+	White	Non-White	N	%
REGION I								
Williams	1,041	1,287	1,424	904	2,312	16	2,328	
Divide	287	320	372	235	607	0	607	
McKenzie	324	328	410	242	640	12	652	
TOTAL	1,652	1,935	2,206	1,381	3,559	28	3,587	4.7
ROW PERCENT	46.1	53.9	61.5	38.5	99.2	0.8		
REGION II								
Ward	2,081	2,847	3,087	1,841	4,903	25	4,928	
Bottineau	782	814	921	675	1,595	1	1,596	
Burke	386	398	487	297	783	1	784	
McHenry	671	720	845	546	1,385	6	1,391	
Mountrail	514	549	645	418	1,034	29	1,063	
Pierce	425	530	592	363	954	1	955	
Renville	288	304	379	213	591	1	592	
TOTAL	5,147	6,162	6,956	4,353	11,245	64	11,309	14.7
ROW PERCENT	45.5	54.5	61.5	38.5	99.4	0.6		
REGION III								
Ramsey	911	1,161	1,152	920	2,062	10	2,072	
Benson	600	610	706	504	1,159	51	1,210	
Cavalier	590	681	728	543	1,266	5	1,271	
Towner	314	394	397	311	706	2	708	
Eddy	333	378	389	322	708	3	711	
Rolette	461	549	654	376	858	172	1,030	
TOTAL	3,229	3,773	4,026	2,976	6,759	243	7,002	9.1
ROW PERCENT	46.1	53.9	57.5	42.5	96.5	3.5		
REGION IV								
Grand Forks	1,933	2,933	2,688	2,178	4,848	18	4,866	
Nelson	566	635	594	607	1,200	1	1,201	
Walsh	1,149	1,358	1,337	1,170	2,500	7	2,507	
Pembina	765	919	921	763	1,677	7	1,684	
TOTAL	4,413	5,845	5,540	4,718	10,225	33	10,258	13.4
ROW PERCENT	43.0	57.0	54.0	46.0	99.7	0.3		
REGION V								
Cass	3,177	4,838	4,411	3,604	7,994	21	8,015	
Traill	811	987	924	874	1,795	3	1,798	
Steele	242	264	292	214	506	0	506	
Ransom	551	638	647	542	1,188	1	1,189	
Richland	1,154	1,464	1,386	1,232	2,607	11	2,618	
Sargent	424	453	485	392	875	2	877	
TOTAL	6,359	8,644	8,145	6,858	14,965	38	15,003	19.5
ROW PERCENT	42.4	57.6	54.3	45.7	99.8	0.2		
REGION VI								
Stutsman	1,248	1,708	1,725	1,231	2,950	6	2,956	
Wells	645	711	796	560	1,356	0	1,356	
McIntosh	463	574	621	416	1,036	1	1,037	
Logan	306	358	442	222	660	4	664	
Foster	343	389	425	307	732	0	732	
Dickey	518	617	630	505	1,135	0	1,135	
LaMoure	541	636	701	476	1,176	1	1,177	
Barnes	1,068	1,384	1,364	1,088	2,444	8	2,452	
Griggs	358	364	417	305	721	1	722	
TOTAL	5,490	6,741	7,121	5,110	12,210	21	12,231	15.9
ROW PERCENT	44.9	55.1	58.2	41.8	99.8	0.2		
REGION VII								
Burleigh	1,764	2,633	2,676	1,721	4,383	14	4,397	
McLean	812	886	1,063	635	1,692	6	1,698	
Sheridan	226	221	266	181	447	0	447	
Kidder	250	287	333	204	537	0	537	
Emmons	426	451	535	342	877	0	877	
Morton	1,035	1,449	1,480	1,004	2,480	4	2,484	
Mercer	440	519	639	320	959	0	959	
Oliver	93	94	125	62	187	0	187	
Grant	295	315	425	185	609	1	610	
Sioux	68	71	87	52	96	43	139	
TOTAL	5,409	6,926	7,629	4,706	12,267	68	12,335	16.0
ROW PERCENT	43.8	56.2	61.8	38.2	99.4	0.6		
REGION VIII								
Stark	975	1,235	1,376	834	2,209	1	2,210	
Slope	46	44	53	37	90	0	90	
Hettinger	332	366	472	226	698	0	698	
Golden Valley	189	243	246	186	430	2	432	
Dunn	256	256	336	176	507	5	512	
Bowman	255	319	347	227	573	1	574	
Billings	37	35	54	18	72	0	72	
Adams	262	291	332	221	553	0	553	
TOTAL	2,352	2,789	3,216	1,925	5,132	9	5,141	6.7
ROW PERCENT	45.7	54.3	62.6	37.4	99.8	0.2		
COUNTY NOT AVAILABLE	45	105	125	25	144	6	150	
STATE TOTAL	34,096	42,920	44,964	32,025	76,506	510	77,016	100.0
ROW PERCENT	44.3	55.7	58.4	41.6	99.3	0.7	100.0	

Table Ic: Estimates of North Dakota's Civilian Population By Age, Race, and Sex--1970 and 1980

1970 Civilian Population

	Total				White			Non-White		
Age	Total		M	F	Total	M	F	Total	M	F
	N	%								
0-5	63,121	10.4	32,268	30,853	59,925	30,677	29,248	3,196	1,591	1,605
6-15	136,564	22.5	69,700	66,864	131,045	66,903	64,142	5,519	2,797	2,722
16-24	96,526	15.9	48,212	48,314	93,524	46,618	46,906	3,002	1,594	1,408
25-44	122,380	20.2	58,049	64,331	118,553	56,236	62,317	3,827	1,813	2,014
45-64	121,935	20.1	61,598	60,337	120,256	60,789	59,467	1,679	809	870
65+	66,357	10.9	31,058	35,299	65,654	30,711	34,943	703	347	356
Total	606,883	100.0	300,885	305,998	588,957	291,934	297,023	17,926	8,951	8,975

1980 Civilian Population

	Total				White			Non-White		
Age	Total		M	F	Total	M	F	Total	M	F
	N	%								
0-5	54,300	8.5	29,400	24,900	51,500	27,900	23,600	2,800	1,500	1,300
6-15	107,900	16.8	55,600	52,300	102,100	52,800	49,300	5,800	2,800	3,000
16-24	116,100	18.1	56,500	59,600	111,800	54,500	57,300	4,300	2,000	2,300
25-44	157,600	24.6	78,700	78,900	152,600	76,300	76,300	5,000	2,400	2,600
45-64	124,200	19.4	62,000	62,200	122,200	61,000	61,200	2,000	1,000	1,000
65+	80,500	12.6	37,900	42,600	79,400	37,400	42,000	1,100	500	600
Total	640,600	100.0	320,100	320,500	619,600	309,900	309,700	21,000	10,200	10,800

JOB SERVICE NORTH DAKOTA
BOX 1537, BISMARCK, NORTH DAKOTA 58505
(701) 224-2868

NDUC-303
(R 1-79)

Figure IIa: EMPLOYER'S CONTRIBUTION AND WAGE REPORT

See Instructions on Back of Employer Copy

Account Number	Industry	Locality	Contribution Rate	Quarter Ending	Date Due
				Taxable wages in paid each employee.	are the first

If no wages were paid write none in item 1, sign and return.

1. Total Wages Paid This Quarter		
2. Excess Wages		
3. Taxable Wages (line 1 minus line 2)		
4. Contribution Due (Contribution Rate X line 3)		
5. Adjustments for Prior Balance		
6. Penalty and Interest (See Instructions)		
7. Total Remittance Make Payable to: Job Service North Dakota		

TC ☐ RC ☐

8. EMPLOYEE'S SOCIAL SECURITY NUMBER	9. NAME OF EMPLOYEE	10. Gross Wages Paid This Quarter
11. Total Wages This Page →		

If more space is needed, attach additional pages.

Continuation forms (NDUC-304) are available on request.

12. Number of employees listed on report (all pages) ☐

13. Number of employees during pay period which includes the 12th of each month.

1st Month ☐

2nd Month ☐

3rd Month ☐

14. If your name or address has changed or ownership of the business has changed, complete the form printed on the back of the cover. If the ownership changed during the quarter a separate report must be submitted by each ownership covering those wages each one paid.

15. I certify that this report is correct and no part of the contribution was or will be paid by any employee.

Signature: Title: Date:

Table IIb: Job Insurance Covered Employment, Earnings, and Total Earnings by Quarter 1978[1]

	1st Quarter	2d Quarter	3d Quarter	4th Quarter	Total		
					Number	Percent	
TOTAL ALL INDUSTRIES							
Average Monthly Employment	203,022	215,994	220,281	222,024	215,330	100.0	
Average Monthly Earnings	818.27	841.03	868.66	906.25	$859.54		
Total Earnings (Dollars)	498,392,201.00	544,969,452.00	574,048,642.00	603,626,011.00	$2,221,036,306.00	100.0	
(Row Percent)	22.4	24.5	25.9	27.2	100.0%		
MINING							
Average Monthly Employment	3,496	4,018	4,912	4,756	4,296	2.0	
Average Monthly Earnings	1,359.85	1,438.37	1,396.60	1,516.02	$1,431.78		
Total Earnings (Dollars)	14,262,150.00	17,338,140.00	20,580,369.00	21,630,563.00	$73,811,222.00	3.3	
(Row Percent)	19.3	23.5	27.9	29.3	100.0%		
CONSTRUCTION							
Average Monthly Employment	13,061	18,602	22,609	19,467	18,435	8.6	
Average Monthly Earnings	1,145.40	1,209.15	1,268.72	1,321.82	$1,245.87		
Total Earnings (Dollars)	44,880,250.00	67,478,028.00	86,053,258.00	77,195,394.00	$275,606,930.00	12.4	
(Row Percent)	16.3	24.5	31.2	28.0	100.0%		
MANUFACTURING							
Average Monthly Employment	15,326	15,530	15,725	16,462	15,761	7.3	
Average Monthly Earnings	963.88	982.80	1,025.63	1,059.22	$1,008.84		
Total Earnings (Dollars)	44,317,448.00	45,788,600.00	48,383,941.00	52,310,402.00	$190,800,391.00	8.6	
(Row Percent)	23.2	24.0	25.4	27.4	100.0%		
TRANS., COMM., & PUB. UTIL.							
Average Monthly Employment	10,999	11,237	11,530	12,075	11,460	5.3	
Average Monthly Earnings	1,159.48	1,199.04	1,266.77	1,262.15	$1,223.21		
Total Earnings (Dollars)	38,259,307.00	40,420,851.00	43,817,639.00	45,721,541.00	$168,219,338.00	7.6	
(Row Percent)	22.7	24.0	26.1	27.2	100.0%		
WHOLESALE TRADE							
Average Monthly Employment	18,789	20,124	21,035	20,463	20,103	9.3	
Average Monthly Earnings	1,027.44	1,014.27	1,053.36	1,136.12	$1,058.58		
Total Earnings (Dollars)	57,913,637.00	61,233,212.00	66,472,077.00	69,745,412.00	$255,364,338.00	11.5	
(Row Percent)	22.7	24.0	26.0	27.3	100.0%		
RETAIL TRADE							
Average Monthly Employment	41,836	44,633	45,877	45,955	44,575	20.7	
Average Monthly Earnings	530.68	540.02	539.33	573.64	$546.32		
Total Earnings (Dollars)	66,604,161.00	72,307,975.00	74,229,027.00	79,085,398.00	$292,226,561.00	13.2	
(Row Percent)	22.8	24.7	25.4	27.1	100.0%		
FIN., INS., & REAL ESTATE							
Average Monthly Employment	9,724	10,024	10,292	10,316	10,089	4.7	
Average Monthly Earnings	871.63	853.24	866.01	1,029.70	$906.03		
Total Earnings (Dollars)	25,427,294.00	25,658,498.00	26,738,832.00	31,867,041.00	$109,691,665.00	4.9	
(Row Percent)	23.2	23.4	24.4	29.0	100.0%		
SERVICES							
Average Monthly Employment	39,972	41,310	41,584	42,027	41,223	19.1	
Average Monthly Earnings	637.37	643.31	672.08	703.41	$664.28		
Total Earnings (Dollars)	76,432,519.00	79,725,051.00	83,843,306.00	88,687,033.00	$328,687,909.00	14.8	
(Row Percent)	23.2	24.3	25.5	27.0	100.0%		
AGRICULTURE							
Average Monthly Employment	1,218	1,885	2,079	1,919	1,775	0.8	
Average Monthly Earnings	667.26	672.89	724.09	806.42	$723.00		
Total Earnings (Dollars)	2,438,167.00	3,805,169.00	4,516,162.00	4,642,542.00	$15,402,040.00	0.7	
(Row Percent)	15.8	24.7	29.3	30.1	99.9%		
							Percent
TOTAL GOVERNMENT							
Average Monthly Employment	48,601	48,631	44,638	48,584	47,613	22.1	100.0
Average Monthly Earnings	876.92	899.38	891.72	910.75	$894.75		
Total Earnings (Dollars)	127,857,268.00	131,213,928.00	119,414,031.00	132,740,685.00	$511,225,912.00	23.0	100.0
(Row Percent)	25.0	25.7	23.3	26.0	100.0%		
Federal Government							
Average Monthly Employment	9,712	9,783	9,907	9,860	9,815		20.6
Average Monthly Earnings	1,165.01	1,208.63	1,201.08	1,173.49	$1,187.11		
Total Earnings (Dollars)	33,943,818.00	35,471,980.00	35,697,357.00	34,711,949.00	$139,825,104.00		27.4
(Row Percent)	24.3	25.4	25.5	24.8	100.0%		
State Government							
Average Monthly Employment	12,974	13,925	14,605	13,053	13,639		28.7
Average Monthly Earnings	949.49	844.59	858.64	1,009.27	$912.70		
Total Earnings (Dollars)	36,955,923.00	35,282,755.00	37,621,316.00	39,522,036.00	$149,382,030.00		29.2
(Row Percent)	24.7	23.6	25.2	26.5	100.0%		
Local Government							
Average Monthly Employment	25,915	24,923	20,126	25,671	24,159		50.7
Average Monthly Earnings	732.62	808.61	763.45	759.70	$765.83		
Total Earnings (Dollars)	56,957,527.00	60,459,193.00	46,095,358.00	58,506,700.00	$222,018,778.00		43.4
(Row Percent)	25.7	27.2	20.8	26.3	100.0%		

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[1] Excludes railroad and military employment and earnings. BLA estimates of personal income for these two sectors are 66 and 152 million dollars, respectively. (21:64 and Appendix Table IIf)

Table IIc: Job Insurance Covered Employment, Earnings, and Total Earnings by Quarter 1979 [1]

	1st Quarter	2d Quarter	3d Quarter	4th Quarter	Total		
					Number	Percent	Percent
TOTAL ALL INDUSTRIES							
Average Monthly Employment	212,590	224,590	229,979	232,069	224,807	99.9	
Average Monthly Earnings	891.11	906.90	937.46	993.12	$933.23		
Total Earnings (Dollars)	568,321,364.00	611,041,942.00	646,787,303.00	691,419,762.00	$2,517,570,371.00	100.0	
(Row Percent)	22.6	24.3	25.7	27.4	100.0%		
MINING							
Average Monthly Employment	4,595	5,130	6,203	6,517	5,611	2.5	
Average Monthly Earnings	1,526.02	1,583.96	1,620.61	1,672.71	$1,607.99		
Total Earnings (Dollars)	21,036,217.00	24,377,085.00	30,157,920.00	32,703,057.00	$108,274,279.00	4.3	
(Row Percent)	19.4	22.5	27.9	30.2	100.0%		
CONSTRUCTION							
Average Monthly Employment	13,315	18,091	23,034	19,720	18,540	8.3	
Average Monthly Earnings	1,227.34	1,258.92	1,337.18	1,422.50	$1,321.06		
Total Earnings (Dollars)	49,026.175.00	68,325,302.00	92,402,149.00	84,155,227.00	$293,908,853.00	11.7	
(Row Percent)	16.7	23.3	31.4	28.6	100.0%		
MANUFACTURING							
Average Monthly Employment	16,040	16,659	16,875	16,956	16,632	7.4	
Average Monthly Earnings	1,045.08	1,040.12	1,101.77	1,155.05	$1,086.24		
Total Earnings (Dollars)	50,289,076.00	51,981,892.00	55,777,214.00	58,755,043.00	$216,803,225.00	8.6	
(Row Percent)	23.2	24.0	25.7	27.1	100.0%		
TRANS., COMM., & PUB. UTIL.							
Average Monthly Employment	12,018	12,460	12,723	13,222	12,606	5.6	
Average Monthly Earnings	1,268.75	1,258.37	1,344.19	1,381.92	$1,314.90		
Total Earnings (Dollars)	45,743,362.00	47,037,894.00	51,306,495.00	54,815,304.00	$198,903,055.00	7.9	
(Row Percent)	23.0	23.6	25.8	27.6	100.0%		
WHOLESALE TRADE							
Average Monthly Employment	20,330	21,492	22,355	21,602	21,445	9.5	
Average Monthly Earnings	1,145.87	1,125.64	1,143.67	1,279.33	$1,173.84		
Total Earnings (Dollars)	69,886,446.00	72,577,030.00	76,700,311.00	82,908,030.00	$302,071,817.00	12.0	
(Row Percent)	23.1	24.0	25.4	27.5	100.0%		
RETAIL TRADE							
Average Monthly Employment	43,676	46,168	47,075	47,756	46,169	20.5	
Average Monthly Earnings	581.25	583.40	583.94	616.57	$591.61		
Total Earnings (Dollars)	76,160,224.00	80,802,893.00	82,467,373.00	88,335,225.00	$327,765,715.00	13.0	
(Row Percent)	23.2	24.6	25.2	27.0	100.0%		
FIN., INS., & REAL ESTATE							
Average Monthly Employment	10,267	10,547	10,687	10,781	10,571	4.7	
Average Monthly Earnings	941.63	909.29	931.15	1,109.07	$973.56		
Total Earnings (Dollars)	29,003,075.00	28,770,709.00	29,853,628.00	35,870,773.00	$123,498,185.00	4.9	
(Row Percent)	23.5	23.3	24.2	29.0	100.0%		
SERVICES							
Average Monthly Employment	42,351	43,335	43,717	44,307	43,428	19.3	
Average Monthly Earnings	699.30	713.07	741.56	773.50	$732.29		
Total Earnings (Dollars)	88,847,645.00	92,702,253.00	97,256,383.00	102,814,012.00	$381,620,293.00	15.2	
(Row Percent)	23.3	24.3	25.5	26.9	100.0%		
AGRICULTURE							
Average Monthly Employment	1,246	1,833	2,364	1,952	1,849	0.8	
Average Monthly Earnings	743.37	748.28	737.34	941.37	$794.92		
Total Earnings (Dollars)	2,778,732.00	4,114,793.00	5,229,191.00	5,512,656.00	$17,635,372.00	0.7	
(Row Percent)	15.8	23.3	29.6	31.3	100.0%		
TOTAL GOVERNMENT							
Average Monthly Employment	48,752	48,874	44,946	49,256	47,957	21.3	100.0
Average Monthly Earnings	92.80	957.22	931.76	984.99	$950.66		
Total Earnings (Dollars)	135,550,412.00	140,352,091.00	125,636,639.00	145,550,435.00	$547,089,577.00	21.7	100.0
(Row Percent)	24.8	25.7	22.9	26.6	100.0%		
Federal Government							
Average Monthly Employment	9,336	9,808	9,799	9,525	9,617		20.1
Average Monthly Earnings	1,269.79	1,212.27	1,242.62	1,311.75	$1,258.59		
Total Earnings (Dollars)	35,564,228.00	35,669,893.00	36,529,388.00	37,483,132.00	$145,246,641.00		26.5
(Row Percent)	24.5	24.6	25.1	25.8	100.0%		
State Government							
Average Monthly Employment	13,393	14,307	14,606	13,757	14,016		29.2
Average Monthly Earnings	988.30	916.13	947.26	1,052.46	$974.96		
Total Earnings (Dollars)	39,712,307.00	39,321,121.00	41,507,172.00	43,436,141.00	$163,976,741.00		30.0
(Row Percent)	24.2	24.0	25.3	26.5	100.0%		
Local Government							
Average Monthly Employment	26,023	24,759	20,541	25,974	24,324		50.7
Average Monthly Earnings	772.06	879.96	772.44	829.43	$814.91		
Total Earnings (Dollars)	60,273,877.00	65,361,077.00	47,600,079.00	64,631,162.00	$237,866,195.00		43.5
(Row Percent)	25.3	27.5	20.0	27.2	100.0%		

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[1] Excludes railroad and military employment and earnings. BEA estimates of personal income for these two sectors are 82 and 154 million dollars, respectively. (21:64 and Appendix Table IIf)

Table IId: Job Insurance Covered Average Monthly Earnings by County, 1979

		Dollars
1.	Williams	$1,032
	Divide	753
	McKenzie	1,178
	REGION I AVERAGE	1,041
2.	Ward	928
	Bottineau	822
	Burke	926
	McHenry	868
	Mountrail	756
	Pierce	759
	Renville	811
	REGION II AVERAGE	891
3.	Ramsey	785
	Benson	733
	Cavalier	797
	Towner	751
	Eddy	783
	Rolette	811
	REGION III AVERAGE	784
4.	Grand Forks	921
	Nelson	744
	Walsh	768
	Pembina	1,008
	REGION IV AVERAGE	898
5.	Cass	1,023
	Ransom	747
	Richland	860
	Sargent	1,009
	Steele	889
	Traill	804
	REGION V AVERAGE	984
6.	Stutsman	$ 909
	Wells	764
	McIntosh	593
	Logan	635
	Foster	763
	Dickey	700
	LaMoure	739
	Barnes	813
	Griggs	790
	REGION VI AVERAGE	813
7.	Burleigh	1,005
	McLean	1,153
	Sheridan	698
	Kidder	690
	Emmons	665
	Morton	905
	Mercer	1,384
	Oliver	1,251
	Grant	709
	Sioux	936
	REGION VII AVERAGE	1,017
8.	Stark	881
	Slope	859
	Hettinger	722
	Golden Valley	791
	Dunn	907
	Bowman	906
	Billings	1,288
	Adams	833
	REGION VIII AVERAGE	887
	STATE AVERAGE	993

Table IIe: North Dakota Personal Income by Major Sources 1974-79 (Thousands of Dollars)

	1974 [1]	1975 [2]	1976 [2]	1977 [2]	1978 [2]	1979 [2]
Total Labor and Proprietors Income by Place of Work [3]						
By Type						
Wage and Salary Disbursements	1,625,232	1,853,451	2,081,119	2,255,356	2,574,209	2,912,806
Other Labor Income	89,681	118,374	142,949	161,917	190,510	223,107
Proprietors Income [4]	1,235,705	952,800	568,770	466,792	1,015,516	575,873
Farm	1,027,898	719,263	319,366	212,186	716,248	253,066
Non-Farm [4]	207,807	233,537	249,404	254,606	299,268	322,807
By Industry						
Farm	1,084,499	771,856	386,990	278,476	793,300	337,043
Non-Farm	1,866,119	2,152,769	2,405,848	2,605,589	2,986,935	3,374,743
Private	1,355,165	1,569,139	1,797,951	1,953,064	2,279,439	2,610,061
Ag. Serv., For., Fish., & Other [5]	9,728	10,034	10,937	11,606	14,097	15,962
Mining	29,196	35,928	52,338	62,767	92,831	132,836
Construction	172,607	212,289	258,383	273,466	344,308	365,648
Manufacturing	138,325	184,860	199,166	197,032	220,201	251,926
Non-Durable Goods	62,436	72,098	78,397	87,940	99,881	109,475
Durable Goods	75,889	112,762	120,769	109,092	120,320	142,451
Transportation, Communication, & Public Utilities	178,251	194,188	216,280	243,922	297,650	348,241
Wholesale Trade	192,409	227,171	250,419	268,590	305,399	357,307
Retail Trade	278,083	284,189	317,221	333,302	358,586	408,496
Finance, Insurance, & Real Estate	80,413	92,809	117,561	142,134	164,170	181,002
Services	276,153	327,671	375,646	420,245	482,197	548,643
Government & Government Enterprises	510,954	583,630	607,897	652,525	707,496	764,682
Federal, Civilian	115,865	154,328	135,219	141,407	149,690	154,874
Federal, Military	139,354	142,537	146,737	146,192	151,651	154,495
State and Local	255,735	286,765	325,941	364,926	406,155	455,313
Derivation of Personal Income by Place of Residence						
Total Labor and Proprietors Income by Place of Work	2,950,618	2,924,625	2,792,838	2,884,065	3,780,235	3,711,786
Less: Personal Contributions for Social Insurance by Place of Work	134,494	156,573	164,243	162,179	186,231	216,122
Net Labor and Proprietors Income by Place of Work	2,816,124	2,768,052	2,628,595	2,721,886	3,594,004	3,495,664
Plus: Residence Adjustment	-71,143	-81,654	-96,587	-100,296	-111,506	-123,423
Net Labor and Proprietors Income by Place of Residence	2,744,981	2,686,398	2,532,008	2,621,590	3,482,498	3,372,241
Plus: Dividends, Interest, and Rent [6]	632,369	644,838	711,921	821,256	940,741	1,046,426
Plus: Transfer Payments	362,509	424,195	467,757	518,494	561,230	628,650
Personal Income by Place of Residence	3,739,859	3,755,431	3,711,686	3,961,340	4,984,469	5,047,317
Per Capita Personal Income (Dollars)	5,883	5,896	5,756	6,092	7,635	7,683
Total Population (Thousands)	635.7	636.9	644.8	650.3	652.8	656.9

[1] Estimates based on 1967 SIC.

[2] Estimates based on 1972 SIC.

[3] Consists of wage and salary disbursements, other labor income, and proprietors' income. Primary source for private non-farm wages: ES-202 covered wages--Job Service North Dakota.

[4] Includes the capital consumption adjustment for non-farm proprietors.

[5] Includes wages and salaries of U.S. residents working for international organizations in the U.S.

[6] Includes the capital consumption adjustment for rental income of persons.

Table IIf: Nonagricultural Job Insurance Covered Wage and Salary Employment
by Industry & County 1978 Annual Average

	Mining	Const.	Mfg.	Trans, Comm, Ut	Whole. Trade	Retail Trade	Fin, Ins, RE	Service	Govt.	Number	Percent
REGION I											
Williams	941	528	401	463	732	1,607	293	1,426	1,186	7,577	
Divide	48	27	21	8	69	126	40	176	218	733	
McKenzie	434	140	13	105	161	185	40	283	363	1,724	
TOTAL	1,423	695	435	576	962	1,918	373	1,885	1,767	10,034	
ROW PERCENT	14.2	6.9	4.3	5.7	9.6	19.1	3.7	18.8	17.6		4.7
REGION II											
Ward	157	1,299	817	807	1,822	4,462	877	3,954	3,922	18,117	
Bottineau	90	101	87	98	182	460	89	385	575	2,067	
Burke	105	19	17	56	90	107	50	48	251	743	
McHenry	42	144	65	113	115	205	59	125	460	1,328	
Mountrail	47	70	81	72	147	369	66	473	602	1,927	
Pierce	2	66	126	65	160	418	70	412	282	1,601	
Renville	107	42	9	21	86	101	22	150	240	778	
TOTAL	550	1,741	1,202	1,232	2,602	6,122	1,233	5,547	6,332	26,561	
ROW PERCENT	2.1	6.6	4.5	4.6	9.8	23.1	4.6	20.9	23.8		12.4
REGION III											
Ramsey	3	252	143	171	383	1,355	199	997	1,091	4,594	
Benson	2	72	336	36	126	141	58	288	452	1,511	
Cavalier	9	133	43	156	175	334	82	317	382	1,631	
Towner	0	52	19	39	145	153	52	181	221	862	
Eddy	29	91	12	20	82	154	48	186	190	812	
Rolette	8	269	195	63	152	431	111	640	1,269	3,138	
TOTAL	51	869	748	485	1,063	2,568	550	2,609	3,605	12,548	
ROW PERCENT	0.4	6.9	6.0	3.9	8.5	20.4	4.4	20.8	28.7		5.9
REGION IV											
Grand Forks	32	1,601	1,396	1,110	1,332	5,688	983	3,851	5,798	21,791	
Nelson	2	83	57	41	173	221	62	284	356	1,279	
Walsh	42	319	213	191	339	940	201	728	1,346	4,319	
Pembina	1	236	327	161	224	547	109	417	669	2,691	
TOTAL	77	2,239	1,993	1,503	2,068	7,396	1,355	5,380	8,169	30,080	
ROW PERCENT	0.3	7.4	6.6	5.0	6.9	24.6	4.5	17.5	27.2		14.1
REGION V											
Cass	8	2,939	3,150	2,192	4,911	8,752	2,743	7,956	6,477	39,128	
Traill	7	96	329	134	281	444	115	470	566	2,442	
Steele	0	30	41	45	95	71	41	35	207	565	
Ransom	0	69	226	53	189	400	76	270	374	1,657	
Richland	11	369	1,002	188	401	891	166	646	1,204	4,878	
Sargent	12	31	591	23	104	113	35	88	275	1,272	
TOTAL	38	3,534	5,339	2,635	5,981	10,671	3,176	9,465	9,103	49,942	
ROW PERCENT	0.1	7.1	10.7	5.3	12.0	21.4	6.3	18.9	18.2		23.4
REGION VI											
Stutsman	16	707	1,076	418	605	1,837	393	1,609	2,135	8,796	
Wells	9	94	39	53	219	363	69	237	359	1,442	
McIntosh	0	33	89	22	162	180	56	247	264	1,053	
Logan	0	42	15	12	145	106	28	63	202	613	
Foster	5	118	41	79	134	278	71	289	265	1,280	
Dickey	0	78	175	61	226	388	70	494	405	1,897	
LaMoure	1	46	46	53	255	222	80	118	365	1,186	
Barnes	0	328	169	118	462	988	150	690	952	3,857	
Griggs	1	24	63	17	108	157	46	133	216	765	
TOTAL	32	1,470	1,713	833	2,316	4,519	963	3,880	5,163	20,889	
ROW PERCENT	0.2	7.0	8.2	4.0	11.1	21.6	4.6	18.6	24.7		9.8
REGION VII											
Burleigh	171	1,977	1,430	1,656	1,663	4,904	1,058	5,114	5,311	23,284	
McLean	123	1,611	52	225	220	475	87	484	701	3,978	
Sheridan	24	37	19	6	25	70	32	35	171	419	
Kidder	1	34	24	33	45	109	31	79	213	569	
Emmons	3	85	40	33	111	205	41	162	362	1,042	
Morton	39	676	874	484	529	1,418	256	1,460	1,532	7,268	
Mercer	356	1,253	35	316	152	321	57	293	361	3,144	
Oliver	90	139	9	86	10	44	4	18	127	527	
Grant	18	26	8	22	59	125	38	134	219	649	
Sioux	2	24	26	4	25	38	8	213	422	72	
TOTAL	827	5,862	2,517	2,865	2,839	7,709	1,612	7,992	9,419	41,642	
ROW PERCENT	2.0	14.1	6.0	6.9	6.8	18.5	3.9	19.2	22.6		19.5
REGION VIII											
Stark	423	562	589	379	592	1,775	274	1,709	1,239	7,542	
Slope	27	4	0	0	0	11	4	11	44	101	
Hettinger	8	84	26	37	103	164	42	153	250	867	
Golden Valley	43	21	23	19	54	155	36	104	153	608	
Dunn	126	177	4	37	74	97	22	41	283	861	
Bowman	216	90	18	47	150	259	50	205	244	1,279	
Billings	209	9	1	0	93	20	4	6	112	454	
Adams	6	55	35	46	156	178	33	253	188	950	
TOTAL	1,058	1,002	696	565	1,222	2,659	465	2,482	2,513	12,662	
ROW PERCENT	8.4	7.9	5.5	4.5	9.6	21.0	3.7	19.6	19.8		5.9
MULTI COUNTY	240	1,023	1,118	766	1,050	1,013	362	2,083	1,542	9,197	
ROW PERCENT	2.6	11.1	12.2	8.3	11.4	11.0	3.9	22.7	16.8		4.3
STATE TOTAL	4,296	18,435	15,761	11,460	20,103	44,575	10,089	41,223	47,613	213,555	
ROW PERCENT	2.0	8.6	7.4	5.4	9.4	20.9	4.7	19.3	22.3		100.0

Table IIg: Nonagricultural Job Insurance Covered Wage and Salary Employment by Industry & County 1979 Annual Average

	Mining	Const.	Mfg.	Trans, Comm, Ut	Whole. Trade	Retail Trade	Fin, Ins, RE	Service	Govt.	Number	Percent
REGION I											
Williams	1,348	620	452	571	864	1,802	301	1,602	1,214	8,774	
Divide	48	30	23	13	78	137	38	175	192	734	
McKenzie	752	162	15	102	201	204	44	308	349	2,137	
TOTAL	2,148	812	490	686	1,143	2,143	383	2,085	1,755	11,645	
ROW PERCENT	18.4	7.0	4.2	5.9	9.8	18.4	3.3	17.9	15.1		5.2
REGION II											
Ward	157	1,383	834	884	1,966	4,521	903	4,026	3,905	18,479	
Bottineau	140	105	90	96	202	465	90	409	580	2,177	
Burke	117	23	20	58	84	114	44	57	255	772	
McHenry	35	129	46	131	140	214	57	138	447	1,337	
Mountrail	49	86	60	79	155	396	67	540	570	2,002	
Pierce	0	67	135	67	158	436	69	422	291	1,655	
Renville	55	40	5	25	86	100	21	152	228	712	
TOTAL	553	1,833	1,190	1,340	2,801	6,246	1,251	5,744	6,276	27,234	
ROW PERCENT	2.0	6.7	4.4	4.9	10.3	22.9	4.6	21.1	23.1		12.3
REGION III											
Ramsey	1	286	124	185	378	1,314	197	997	1,114	4,596	
Benson	1	101	443	34	136	125	73	318	433	1,664	
Cavalier	1	84	37	132	185	309	82	324	383	1,537	
Towner	0	49	24	44	148	160	56	186	218	885	
Eddy	35	72	12	19	87	166	51	171	199	812	
Rolette	4	198	245	72	125	421	99	702	1,309	3,175	
TOTAL	42	790	885	486	1,059	2,495	558	2,698	3,656	12,669	
ROW PERCENT	0.3	6.2	7.0	3.8	8.4	19.7	4.4	21.3	28.9		5.7
REGION IV											
Grand Forks	26	1,547	1,380	1,324	1,271	6,103	1,031	4,039	5,978	22,699	
Nelson	1	75	60	40	184	205	60	285	335	1,245	
Walsh	28	306	195	188	376	939	205	705	1,315	4,257	
Pembina	0	180	320	181	233	532	106	423	659	2,634	
TOTAL	55	2,108	1,955	1,733	2,064	7,779	1,402	5,452	8,287	30,835	
ROW PERCENT	0.2	6.8	6.3	5.6	6.7	25.2	4.6	17.7	26.9		13.9
REGION V											
Cass	6	2,925	3,173	2,372	5,234	8,723	2,830	8,274	6,183	39,720	
Traill	8	90	308	129	302	444	122	540	574	2,517	
Steele	0	31	44	48	97	77	45	38	190	570	
Ransom	0	69	251	57	180	402	85	303	397	1,744	
Richland	3	354	1,253	184	428	889	176	666	1,228	5,181	
Sargent	0	42	674	40	107	120	36	89	267	1,375	
TOTAL	17	3,511	5,703	2,830	6,348	10,655	3,294	9,910	8,839	51,107	
ROW PERCENT	0.0	6.9	11.2	5.5	12.4	20.9	6.4	19.4	17.3		23.0
REGION VI											
Stutsman	15	595	1,155	480	632	1,826	410	1,645	1,943	8,701	
Wells	12	101	50	45	238	385	69	291	366	1,557	
McIntosh	1	33	99	22	175	186	60	266	264	1,106	
Logan	0	39	17	13	149	112	23	69	201	623	
Foster	8	115	40	84	139	285	78	288	299	1,336	
Dickey	0	88	214	66	236	371	75	516	416	1,982	
LaMoure	0	46	44	57	274	217	87	124	373	1,222	
Barnes	0	378	186	140	501	998	159	730	947	4,039	
Griggs	0	28	61	18	118	140	49	136	192	742	
TOTAL	36	1,423	1,866	925	2,462	4,520	1,010	4,065	5,001	21,308	
ROW PERCENT	0.2	6.7	8.8	4.3	11.5	21.2	4.7	19.1	23.5		9.6
REGION VII											
Burleigh	262	2,044	1,558	1,911	1,795	5,343	1,184	5,440	5,496	25,033	
McLean	158	1,114	64	281	240	516	99	522	693	3,687	
Sheridan	1	42	22	7	35	72	35	40	173	427	
Kidder	2	27	22	34	60	88	31	99	219	582	
Emmons	3	81	50	31	117	196	41	161	346	1,026	
Morton	72	765	853	527	568	1,549	281	1,535	1,549	7,699	
Mercer	392	1,895	34	356	152	440	67	384	386	4,106	
Oliver	101	114	6	80	18	41	4	49	128	541	
Grant	1	36	10	20	57	125	38	142	205	634	
Sioux	1	22	23	4	29	37	9	251	396	772	
TOTAL	993	6,140	2,642	3,251	3,071	8,407	1,789	8,623	9,591	44,507	
ROW PERCENT	2.2	13.8	5.9	7.3	6.9	18.9	4.0	19.4	21.6		20.0
REGION VIII											
Stark	623	629	602	394	664	2,067	330	1,907	1,235	8,451	
Slope	49	2	0	0	0	12	5	10	40	118	
Hettinger	12	84	41	39	107	170	45	162	250	910	
Golden Valley	75	19	32	19	72	143	35	98	140	633	
Dunn	205	82	5	47	83	122	24	47	269	884	
Bowman	242	65	17	46	157	270	51	209	241	1,298	
Billings	351	96	1	0	81	23	2	11	113	678	
Adams	1	60	32	51	171	171	35	264	181	966	
TOTAL	1,558	1,037	730	596	1,335	2,978	527	2,708	2,469	13,938	
ROW PERCENT	11.2	7.4	5.2	4.3	9.6	21.4	3.8	19.4	17.7		6.3
MULTI COUNTY	265	888	1,172	764	1,111	972	357	1,879	1,454	8,862	
ROW PERCENT	3.0	10.0	13.2	8.6	12.5	11.0	4.0	21.2	16.4		4.0
STATE TOTAL	5,667	18,542	16,633	12,611	21,394	46,195	10,571	43,164	47,328	222,105	
ROW PERCENT	2.6	8.3	7.5	5.7	9.6	20.8	4.8	19.4	21.3		100.0

Table IIh: Number of Farm Operators by Tenure and Off-Farm Employment--1974,1978

		1974							1978							1974-1978 change in farm operators	
			Ownership			Days of Off-Farm Work				Ownership			Days of Off-Farm Work				
		Total	Full-Owner	Part-Owner	Tenant	Total 2/	≤99 days	100+ days	Total	Full-Owner	Part-Owner	Tenant	Total 2/	≤99 days	100+ days	N	%
1.	Williams	1,106	380	587	139	307	98	209	1,133	369	579	185	518	206	312	27	2.4
	Divide	693	235	364	94	161	75	86	671	223	349	99	245	122	123	- 22	- 3.2
	McKenzie	884	385	419	80	276	109	167	804	324	379	101	322	142	180	- 80	- 9.0
	REGION I TOTAL	2,683	1,000	1,370	313	744	282	462	2,608	916	1,307	385	1,085	470	615	- 75	- 2.8
	PERCENT	100.0	37.3	51.0	11.7	27.7	10.5	17.2	100.0	35.1	50.1	14.8	41.6	18.0	23.6		
2.	Ward	1,425	524	700	201	464	190	274	1,359	456	666	237	629	248	381	- 66	- 4.6
	Bottineau	1,192	382	641	169	365	152	193	1,077	340	545	192	463	204	259	-115	- 9.6
	Burke	671	226	357	88	192	79	113	650	183	328	139	293	115	178	- 21	- 3.1
	McHenry	1,156	479	523	154	282	136	146	1,045	388	506	151	405	148	257	-111	- 9.6
	Mountrail	1,041	394	554	93	249	110	139	935	299	487	149	383	156	227	-106	-10.2
	Pierce	686	286	302	98	152	77	75	613	212	299	102	191	107	84	- 73	-10.6
	Renville	547	166	286	95	129	67	62	541	170	268	103	210	90	120	- 6	- 1.1
	REGION II TOTAL	6,718	2,457	3,363	898	1,813	811	1,002	6,220	2,048	3,099	1,073	2,574	1,068	1,506	-498	- 7.4
	PERCENT	100.0	36.6	50.0	13.4	27.0	12.1	14.9	100.0	32.9	49.8	17.3	41.4	17.2	24.2		
3.	Ramsey	785	333	331	121	199	89	110	772	240	363	169	305	165	140	- 13	- 1.7
	Benson	1,006	375	456	175	218	100	118	865	287	425	153	292	160	132	-141	-14.0
	Cavalier	1,122	380	557	185	263	144	119	1,101	316	565	220	415	229	186	- 21	- 1.9
	Towner	684	248	303	133	129	77	52	628	203	285	140	213	131	82	- 56	- 8.9
	Eddy	394	174	168	52	120	50	70	368	115	195	58	152	101	51	- 26	- 6.6
	Rolette	628	264	270	94	215	60	155	658	218	283	157	308	94	214	30	4.8
	REGION III TOTAL	4,619	1,774	2,085	760	1,144	520	624	4,392	1,379	2,116	897	1,685	880	805	-227	- 4.9
	PERCENT	100.0	38.4	45.1	16.5	24.8	11.3	13.5	100.0	31.4	48.2	20.4	38.4	20.0	18.3		
4.	Grand Forks	1,136	330	597	209	328	149	179	1,086	274	566	246	430	198	232	- 50	- 4.4
	Nelson	762	283	364	115	166	89	77	716	248	333	135	268	148	120	- 46	- 6.0
	Walsh	1,210	418	620	172	342	162	180	1,172	318	622	232	444	220	224	- 38	- 3.1
	Pembina	920	326	452	142	231	102	129	946	284	484	178	362	193	169	26	.3
	REGION IV TOTAL	4,028	1,357	2,033	638	1,067	502	565	3,920	1,124	2,005	791	1,504	759	745	-108	- 2.7
	PERCENT	100.0	33.7	50.5	15.8	26.5	12.5	14.0	100.0	28.7	51.1	20.2	38.4	19.4	19.0		
5.	Cass	1,509	578	619	312	348	157	191	1,433	396	695	342	472	256	216	- 76	- 5.0
	Traill	845	272	409	164	272	150	122	787	212	385	190	325	176	149	- 58	- 6.9
	Steele	569	180	294	95	127	70	57	513	118	285	110	161	100	61	- 56	- 9.8
	Ransom	646	295	277	74	168	65	103	596	259	259	78	235	116	119	- 50	- 7.7
	Richland	1,486	549	707	230	324	158	166	1,368	436	659	273	441	196	245	-118	- 7.9
	Sargent	681	271	328	82	153	76	77	628	211	314	103	240	124	116	- 53	- 7.8
	REGION V TOTAL	5,736	2,145	2,634	957	1,392	676	716	5,325	1,632	2,597	1,096	1,874	968	906	-411	- 7.2
	PERCENT	100.0	37.4	45.9	16.7	24.3	11.8	12.5	100.0	30.6	48.8	20.6	35.2	18.2	17.0		
6.	Stutsman	1,249	536	579	134	252	121	131	1,219	410	620	189	367	201	166	- 30	- 2.4
	Wells	881	315	433	133	167	97	70	800	238	414	148	294	166	128	- 81	- 9.2
	McIntosh	707	259	380	68	156	66	90	654	231	346	77	167	81	86	- 53	- 7.5
	Logan	659	301	281	77	144	66	78	582	202	296	84	184	90	94	- 77	-13.2
	Foster	372	147	195	30	64	28	36	371	116	207	48	131	69	62	- 1	- .3
	Dickey	798	356	353	89	202	102	100	706	298	311	97	261	132	129	- 92	-11.5
	LaMoure	924	395	432	97	219	114	105	875	298	448	129	318	157	161	- 49	- 5.3
	Barnes	1,248	530	538	180	300	146	154	1,147	413	558	176	359	176	183	-101	- 8.1
	Griggs	525	226	222	77	126	72	54	512	194	227	91	187	109	78	- 13	- 2.5
	REGION VI TOTAL	7,363	3,065	3,413	885	1,630	812	818	6,866	2,400	3,427	1,039	2,268	1,181	1,087	-497	- 6.7
	PERCENT	100.0	41.6	46.4	12.0	22.1	11.0	11.1	100.0	35.0	49.9	15.1	33.0	17.2	15.8		
7.	Burleigh	845	400	359	86	290	96	194	828	335	373	120	373	[illegible]	242	- 17	- 2.0
	McLean	1,322	485	661	176	295	140	155	1,270	407	674	189	508	[illegible]	283	- 52	- 3.9
	Sheridan	565	208	279	78	97	52	45	530	167	272	91	166	78	88	- 35	- 2.6
	Kidder	626	287	281	58	167	83	84	593	231	265	97	216	120	96	- 33	- 5.3
	Emmons	951	516	358	77	193	91	102	925	408	386	131	281	125	156	- 26	- 2.7
	Morton	1,095	552	445	98	312	122	190	1,032	498	418	116	377	128	249	- 63	- 5.7
	Mercer	644	243	306	95	145	40	105	579	195	294	90	231	82	149	- 65	-10.1
	Oliver	391	176	184	31	107	50	57	386	149	195	42	163	67	96	- 5	- 1.3
	Grant	828	360	383	85	193	97	96	744	329	302	113	261	143	118	- 84	-10.1
	Sioux	257	86	149	22	46	30	16	226	68	132	26	86	44	42	- 31	-12.1
	REGION VII TOTAL	7,524	3,313	3,405	806	1,845	801	1,044	7,113	2,787	3,311	1,015	2,662	1,143	1,519	-411	- 5.5
	PERCENT	100.0	44.0	45.3	10.7	24.5	10.6	13.9	100.0	39.2	46.5	14.3	37.4	16.1	21.4		
8.	Stark	889	440	350	99	188	83	105	826	359	359	108	315	134	181	- 63	- 7.1
	Slope	330	115	168	47	100	55	45	333	122	153	58	113	59	54	3	.9
	Hettinger	609	219	316	74	134	59	75	548	150	302	96	167	86	81	- 61	-10.0
	Golden Valley	287	100	159	28	67	33	34	332	114	171	47	134	66	68	45	15.7
	Dunn	792	371	332	89	151	71	80	740	329	330	81	265	136	129	- 44	- 5.6
	Bowman	380	136	206	38	80	38	42	414	141	208	65	159	81	78	34	8.9
	Billings	271	132	108	31	64	31	33	295	123	113	59	126	63	63	24	8.9
	Adams	481	196	214	71	149	52	97	420	161	213	46	143	64	79	- 61	-12.7
	REGION VIII TOTAL	4,039	1,709	1,853	477	933	422	511	3,916	1,497	1,849	570	1,422	689	733	-123	- 3.0
	PERCENT	100.0	42.3	45.9	11.8	23.1	10.4	12.7	100.0	38.2	47.2	14.6	36.3	17.6	18.7		
	STATE TOTAL	42,710	16,820	20,156	5,734	10,568	4,826	5,742	40,360	13,783	19,711	6,866	15,074	7,158	7,916	-2,350	- 5.5
	PERCENT	100.0	39.4	47.2	13.4	24.7	11.3	13.4	100.0	34.2	48.8	17.0	37.3	17.7	19.6		

1/ 1978 Census of Agruculture Preliminary Report AC78-P-38

2/ (Total) Farm Operators Working Off-Farm

Table IIIa: Occupational Employment Projections
United States and North Dakota
1976-1985

	United States (thousands)				North Dakota			
	Number		1976-85 Change		Number		1976-85 Change	
Occupation Title	1976	1985	Number	%	1976	1985	Number	%
Total	87,488	104,301	16,813	19.2	292,735	324,832	37,097	12.6
Professional, Technical, Kindred	13,327	15,757	2,430	18.2	37,025	42,826	5,801	15.7
Engineers, Technical	1,213	1,490	277	22.9	1,668	1,918	250	15.0
Engineers, Industrial	205	257	52	25.6	301	331	30	10.0
Engineers, Mining	6	9	3	44.3	27	43	16	59.3
Engineers, Petroleum	20	28	8	37.3	63	105	42	66.7
Life and Physical Scientists	284	358	74	25.8	647	713	66	10.2
Agricultural Scientists	20	26	6	27.5	131	155	24	18.3
Geologists	38	54	16	42.5	79	113	34	43.0
Mathematical Specialists	45	56	11	25.9	59	63	4	6.8
Engineers, Science Technicians	931	1,129	198	21.3	1,824	2,041	217	11.9
Agri., Biolog. Tech. Exc. Health	43	46	3	6.5	284	297	13	4.6
Drafters	326	418	92	28.3	636	784	148	23.3
Medical Workers, Exc. Tech.	1,731	2,305	574	33.1	6,164	7,463	1,299	21.1
Physicians, MD Osteopaths	341	466	125	36.6	1,832	2,045	213	11.6
Registered Nurses	901	1,220	319	35.4	2,338	2,893	555	23.7
Health Technol. and Tech.	438	611	173	39.5	1,231	1,514	283	23.0
Dental Hygienists	27	58	31	18.9	57	100	43	75.4
Technicians, Exc. Health	200	264	64	32.3	497	698	201	40.4
Computer Specialists	394	502	108	27.3	313	387	74	23.6
Social Scientists	208	270	62	30.1	312	377	65	20.8
Teachers	3,637	3,770	133	3.7	14,273	15,831	1,558	10.9
Writers, Artists, Entertainers	1,123	1,298	175	15.6	2,274	2,748	474	20.8
Other Professional, Technical	3,124	3,705	581	18.6	7,763	9,072	1,309	16.9
Farm Management Advisors	8	6	-2	-21.0	65	25	-40	-61.5
Vocational, Ed. Counselors	176	209	33	18.6	561	683	122	21.7
Managers, Officials, Proprietors	9,313	11,278	1,965	21.1	38,328	45,860	7,532	19.7
Buyers, Sales, Loan Managers	1,555	2,103	548	35.2	4,925	6,355	1,430	29.0

Table IIIa, continued

Occupation Title	United States (thousands) Number 1976	United States (thousands) Number 1985	United States 1976-85 Change Number	United States 1976-85 Change %	North Dakota Number 1976	North Dakota Number 1985	North Dakota 1976-85 Change Number	North Dakota 1976-85 Change %
Sales Manager, Retail Trade	328	432	104	31.7	1,004	1,234	230	22.9
Administrator, Pub. Inspector	993	1,219	226	22.8	5,395	6,891	1,496	27.7
Other Managers, Officials, Prop.	6,764	7,956	1,192	17.6	28,008	32,614	4,606	16.4
Restaurant, Cafe, Bar Mgrs.	552	620	68	12.4	2,263	2,112	-151	-6.7
Sales Workers	5,495	6,409	914	16.6	15,120	18,555	3,435	22.7
Hucksters and Peddlers	202	189	-13	-6.5	976	630	-346	-35.5
Sales and Sales Workers, Nec.	4,043	4,723	680	16.8	11,160	14,748	3,588	32.2
Clerical Workers	15,554	20,043	4,489	28.9	35,724	44,967	9,243	25.9
Stenographers, Typists, Sec.	4,483	5,977	1,494	33.3	10,059	13,351	3,292	32.7
Secretaries, Legal	140	210	70	50.0	290	425	135	46.6
Secretaries, Medical	86	155	69	80.3	135	239	104	77.0
Stenographers	100	78	-22	-22.0	353	264	-89	-25.2
Office Machine Operators	726	725	-1	-0.1	774	735	-39	-5.0
Keypunch Operators	276	202	-74	-26.8	318	205	-113	-35.5
Other Clerical Workers	10,345	13,340	2,995	29.0	24,891	30,881	5,990	24.1
Billing Clerks	147	216	69	47.5	254	369	115	45.3
Bookkeepers	1,688	1,900	212	12.6	6,238	6,965	727	11.7
Cashiers	1,256	1,639	383	30.5	3,063	3,838	775	25.3
Shipping, Receiving Clerks	440	533	93	21.2	364	466	102	28.0
Statistical Clerks	337	409	72	21.4	522	622	100	19.2
Craft and Kindred Workers	11,298	13,715	2,417	21.4	33,357	40,817	7,460	22.4
Construction Craft Workers	3,318	4,312	994	30.0	13,051	17,476	4,425	33.9
Carpenters and Apprentices	1,120	1,270	150	24.5	5,391	6,908	1,517	28.1
Brick and Stonemasons and Ap.	177	209	32	18.1	143	180	37	25.9
Electricians and Apprentices	572	711	139	24.3	2,109	2,772	663	31.4
Plumbers, Pipefitters, and Ap.	400	552	152	38.0	1,748	2,470	722	41.3
Blue Collar Worker Supvr, Ne.	1,443	1,774	331	23.0	2,733	3,607	874	32.0
Metalworking Craft Wrks. Exc. M.	1,189	1,407	218	18.3	1,307	1,619	312	23.9
Mechanics, Repairers, Installer	3,015	3,614	599	19.9	10,624	11,965	1,341	12.6
Data Processing Mach. Repairer	50	93	43	86.4	89	131	42	47.2

Table IIIa, continued

Occupation Title	United States (thousands) Number 1976	Number 1985	1976-85 Change Number	1976-85 Change %	North Dakota Number 1976	Number 1985	1976-85 Change Number	1976-85 Change %
Printing Trade Craft Workers	387	402	15	3.9	653	636	-17	-2.6
Transportation, Pub. Util. Craft	511	606	95	18.6	1,913	2,178	265	13.9
Other Craft, Kindred Workers	1,435	1,600	165	11.5	3,076	3,336	260	8.5
Operatives	13,352	15,616	2,264	17.0	23,186	26,493	3,307	14.3
Operatives, Exc. Transport	10,082	11,973	1,891	18.8	13,607	16,431	2,824	20.8
Semiskilled Metalworking	1,315	1,586	271	20.6	1,473	1,757	284	19.3
Punch Stamping Press Oper.	155	189	34	22.0	86	88	2	2.3
Welders and Flame Cutters	659	833	174	26.4	1,064	1,395	331	31.1
Semiskilled Packing, Inspecting	1,375	1,790	415	30.2	1,674	2,104	430	25.7
Other Operatives, Exc. Trans.	6,985	8,224	1,239	17.7	10,427	12,545	2,118	20.3
Transport Equipment Operatives	3,270	3,643	373	11.4	9,579	10,062	483	5.0
Delivery and Route Workers	521	583	62	11.9	1,902	2,220	318	16.7
Truck Drivers	1,741	1,975	234	13.5	4,947	5,609	662	13.4
Service Workers	12,003	14,811	2,808	23.4	42,875	49,574	6,699	15.6
Cleaning Service Workers	2,283	2,746	463	20.2	8,049	9,394	1,345	16.7
Food Service Workers	3,876	4,809	933	24.1	16,370	17,416	1,046	6.4
Health Service Workers	1,835	2,611	776	42.3	6,921	10,048	3,127	45.2
Personal Service Workers	1,581	1,999	418	26.4	4,557	5,515	958	21.0
Child Care Workers, Exc. Priv.	381	620	239	62.7	919	1,478	559	60.8
Protective and Service Worker	1,302	1,733	431	33.1	3,390	4,601	1,211	35.7
Police and Detectives	487	670	183	37.6	1,642	2,544	902	54.9
Private Household Workers	1,125	914	-211	-18.8	3,589	2,599	-990	-27.6
Laborers, Except Farm	4,324	4,812	488	11.3	8,653	9,766	1,113	12.9
Farmers and Farm Workers	2,822	1,860	-962	-34.1	58,467	50,974	-7,493	-12.8
Farmers and Farm Managers	1,513	1,012	-501	-33.1	41,149	35,899	-5,250	-12.8
Farmers (Owners and Tenants)	1,488	973	-515	-34.6	40,766	35,130	-5,636	-13.8
Farm Laborers, Farm Supervisor	1,309	848	-461	-35.2	17,318	15,075	-2,243	-13.0
Farm Laborers, Wage Wrks.	942	[illegible]	-408	-43.3	10,079	7,080	-2,999	-29.8
Farm Laborers, Self-Empl.	326	276	-50	-15.3	7,079	7,803	724	10.2

Table IIIb: Demand and Supply by Occupation; Job Service Applicants Available and Job Openings Received (ESARS 1/ Fiscal Years 1979-1980)

	FY 1979			FY 1980		
Occupation	Job Openings	Applicants Available	Supply as a % of Demand	Job Openings	Applicants Available	Supply as a % of Demand
Professional, Technical, & Kindred	6,818	11,123	163.1	7,256	10,774	148.5
Service	15,179	9,929	65.4	13,151	11,118	84.5
Bench Work	985	875	88.8	808	971	120.2
Structural Work	8,207	9,771	119.1	5,060	10,647	210.4
Transportation	3,232	3,095	95.8	2,166	3,534	163.2
Packaging & Materials Handling	11,319	5,047	44.6	9,497	5,981	63.0
Machine Trades	1,397	1,501	107.4	944	2,060	218.2
Processing	562	510	90.7	434	417	96.1
Clerical	8,476	11,067	130.6	7,446	11,727	157.5
Sales	3,246	5,493	169.2	3,626	5,962	164.4
Farming, Fishery, & Forestry	4,440	2,085	47.0	5,008	2,135	42.6
Other	1,255	673	53.6	954	894	93.7
Partial Applicants 1/	--	2,680	--	--	3,017	--
Total	65,116	81,549	125.2	56,350	86,616	153.7
Row %				-13.5	6.2	

1/ ESARS refers to Employment Security Automated Reporting System. ESARS tables used to develop Table IIIb were Tables A07, 91, and 96. The federal fiscal year is October 1 to September 30. Partial applicants are individuals whose work experience and education are insufficient to assign an occupational title.

The labor market information, or meaning, of ESARS data is difficult to determine because "Applicants Available" data refers to the number of individuals applying for work multiplied times the number of months the person maintains job search activity through Job Service. The applicants available data is essentially a man/month labor availability index. Or, at least, this perception could be fostered if it were not for two other limitations of the data. First, individuals who are working cannot be disaggregated from those who are not working, and secondly, ESARS data excludes certain categories of individuals (job insurance claimants who intend to return to their former employer under call back conditions) without any clear justification relating to their labor market attachment.

Table IVa: The Insured Unemployed by Sex, Age, and Duration of Unemployment
Annual Average for 1980

Age

TOTAL

Duration of Unemployment in Weeks	16-24		25-34		35-44		45-54		55-64		65+		INA		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1	198	10.8	180	9.5	76	9.2	61	8.9	50	8.8	12	10.1	33	15.5	610	9.9
2-4	420	23.0	442	23.3	188	22.7	147	21.6	110	19.4	19	15.4	67	30.9	1,393	22.7
5-14	907	49.6	920	48.5	411	49.7	337	49.5	282	49.8	64	51.6	88	40.9	3,009	49.0
15-26	283	15.5	323	17.1	137	16.5	124	18.2	111	19.5	21	16.5	24	11.0	1,023	16.7
27+	20	1.1	30	1.6	16	1.9	12	1.8	14	2.5	8	6.4	3	1.6	103	1.7
Total	1,828	100.0	1,895	100.0	828	100.0	681	100.0	567	100.0	124	100.0	215	100.0	6,138	100.0
Row %		29.8		30.9		13.5		11.1		9.2		2.0		3.5		100.0

FEMALE

Duration of Unemployment in Weeks	16-24		25-34		35-44		45-54		55-64		65+		INA		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1	36	9.7	26	6.7	14	6.5	13	7.3	7	5.7	1	6.4	14	15.0	111	8.0
2-4	85	23.3	89	22.9	47	22.3	40	21.7	26	20.1	4	17.5	27	29.3	318	22.8
5-14	178	48.6	185	47.5	105	50.4	90	49.1	61	46.8	10	45.4	39	41.7	668	48.0
15-26	63	17.1	81	20.9	39	18.5	36	19.8	32	24.5	4	20.3	11	11.8	266	19.1
27+	5	1.3	8	2.0	5	2.3	4	2.1	4	2.9	2	10.4	2	2.2	30	2.1
Total	367	100.0	389	100.0	210	100.0	183	100.0	130	100.0	21	100.0	93	100.0	1,393	100.0
Row %		26.3		27.9		15.1		13.1		9.3		1.5		6.7		99.9

MALE

Duration of Unemployment in Weeks	16-24		25-34		35-44		45-54		55-64		65+		INA		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1	162	11.1	154	10.2	62	10.0	48	9.6	43	9.8	11	10.7	19	15.6	499	10.5
2-4	335	22.9	353	23.4	141	22.8	107	21.5	84	19.2	15	14.6	40	32.8	1,075	22.7
5-14	729	49.9	735	48.8	306	49.5	247	49.6	221	50.6	54	52.4	49	40.1	2,341	49.3
15-26	220	15.1	242	16.1	98	15.9	88	17.7	79	18.1	17	16.5	13	10.7	757	16.0
27+	15	1.0	22	1.5	11	1.8	8	1.6	10	2.3	6	5.8	1	0.8	73	1.5
Total	1,461	100.0	1,506	100.0	618	100.0	498	100.0	437	100.0	103	100.0	122	100.0	4,745	100.0
Row %		30.8		31.7		13.0		10.5		9.2		2.2		2.6		100.0

Table IVb: North Dakota Labor Force
by County, by Region
Annual Average 1978

	Labor Force	Emp.	Unemployment	
			Number	Rate
1. Divide	1839	1782	57	3.1%
McKenzie	3038	2934	104	3.4%
Williams	11060	10750	310	2.8%
REGION 1 TOTAL	15937	15466	471	3.0%
2. Bottineau	4524	4304	220	4.9%
Burke	2118	2051	67	3.2%
McHenry	3559	3238	321	9.0%
Mountrail	3952	3754	198	5.1%
Pierce	3345	3210	135	4.0%
Renville	1645	1597	48	2.9%
Ward	26815	25651	1164	4.3%
REGION 2 TOTAL	45958	43805	2153	4.7%
3. Benson	3418	3174	244	7.1%
Cavalier	4249	4000	249	5.9%
Eddy	1985	1832	153	7.7%
Ramsey	7066	6757	309	4.4%
Rolette	4606	4176	430	9.3%
Towner	2175	2113	62	2.9%
REGION 3 TOTAL	23499	22052	1447	6.2%
4. Grand Forks	27266	26098	1168	4.3%
Nelson	3001	2879	122	4.1%
Pembina	5939	5580	359	6.0%
Walsh	8319	7852	467	5.6%
REGION 4 TOTAL	44525	42409	2116	4.8%
5. Cass	45669	44136	1533	3.4%
Ransom	3252	3148	104	3.2%
Richland	8880	8491	389	4.4%
Sargent	2749	2632	117	4.3%
Steele	1556	1512	44	2.8%
Traill	4991	4776	215	4.3%
REGION 5 TOTAL	67097	64695	2402	3.6%

	Labor Force	Emp.	Unemployment	
			Number	Rate
6. Barnes	7029	6767	262	3.7%
Dickey	3701	3597	104	2.8%
Foster	2505	2414	91	3.6%
Griggs	1932	1858	74	3.8%
LaMoure	2840	2754	86	3.0%
Logan	1696	1612	84	5.0%
McIntosh	2573	2489	84	3.3%
Stutsman	13179	12714	465	3.5%
Wells	3647	3474	173	4.7%
REGION 6 TOTAL	39102	37679	1423	3.6%
7. Burleigh	28061	26947	1114	4.0%
Emmons	2710	2551	159	5.9%
Grant	1901	1805	96	5.0%
Kidder	1683	1545	138	8.2%
McLean	6250	5924	326	5.2%
Mercer	3992	3847	145	3.6%
Morton	10660	10069	591	5.5%
Oliver	1463	1403	60	4.1%
Sheridan	1480	1373	107	7.2%
Sioux	1360	1257	103	7.6%
REGION 7 TOTAL	59560	56721	2839	4.8%
Adams	2214	2170	44	2.0%
Billings	685	653	32	4.7%
Bowman	2321	2265	56	2.4%
Dunn	2004	1891	113	5.6%
Golden Valley	1240	1198	42	3.4%
Hettinger	2067	1982	85	4.1%
Slope	564	534	30	5.3%
Stark	10469	10030	439	4.2%
REGION 8 TOTAL	21564	20723	841	3.9%
STATE TOTAL	317240	303553	13687	4.3%
Bismarck SMSA	N/A	N/A	N/A	N/A
Fargo-Moorhead SMSA	71774	68995	2779	3.9%
Grand Forks SMSA	43083	40864	2219	5.2%

Table IVc: North Dakota Labor Force
by County, by Region
Annual Average 1979

	Labor Force	Emp.	Unemployment	
			Number	Rate
1. Divide	1770	1730	40	2.3%
McKenzie	3260	3164	96	2.9%
Williams	11262	10991	271	2.4%
REGION 1 TOTAL	16292	15885	407	2.5%
2. Bottineau	4424	4222	202	4.6%
Burke	2079	2029	50	2.4%
McHenry	3667	3382	285	7.8%
Mountrail	3989	3801	188	4.7%
Pierce	3288	3177	111	3.4%
Renville	1806	1753	53	2.9%
Ward	25994	24904	1090	4.2%
REGION 2 TOTAL	45247	43268	1979	4.4%
3. Benson	3481	3286	195	5.6%
Cavalier	4032	3860	172	4.3%
Eddy	1940	1784	156	8.0%
Ramsey	7253	6997	256	3.5%
Rolette	5209	4652	557	10.7%
Towner	2216	2166	50	2.3%
REGION 3 TOTAL	24131	22745	1386	5.7%
4. Grand Forks	28516	27332	1184	4.2%
Nelson	3006	2894	112	3.7%
Pembina	6082	5719	363	6.0%
Walsh	8968	8562	406	4.5%
REGION 4 TOTAL	46572	44507	2065	4.4%
5. Cass	46752	45278	1474	3.2%
Ransom	3335	3222	113	3.4%
Richland	9007	8618	389	4.3%
Sargent	2705	2614	91	3.4%
Steele	1605	1550	55	3.4%
Traill	5044	4826	218	4.3%
REGION 5 TOTAL	68448	66108	2340	3.4%

	Labor Force	Emp.	Unemployment	
			Number	Rate
6. Barnes	7065	6818	247	3.5%
Dickey	3771	3689	82	2.2%
Foster	2400	2311	89	3.7%
Griggs	1898	1836	62	3.3%
LaMoure	2892	2816	76	2.6%
Logan	1730	1655	75	4.3%
McIntosh	2580	2487	93	3.6%
Stutsman	13110	12628	482	3.7%
Wells	3567	3412	155	4.3%
REGION 6 TOTAL	39013	37652	1361	3.5%
7. Burleigh	29952	28863	1089	3.6%
Emmons	2734	2600	134	4.9%
Grant	1937	1859	78	4.0%
Kidder	1703	1610	93	5.5%
McLean	6974	6650	324	4.6%
Mercer	4721	4514	2[illegible]7	4.4%
Morton	10920	10385	535	4.9%
Oliver	1185	1127	58	4.9%
Sheridan	1437	1368	69	4.8%
Sioux	1417	1303	114	8.0%
REGION 7 TOTAL	62980	60279	2701	4.3%
Adams	2138	2102	36	1.7%
Billings	865	836	29	3.4%
Bowman	2312	2262	50	2.2%
Dunn	2245	2125	120	5.3%
Golden Valley	1330	1283	47	3.5%
Hettinger	2104	2029	75	3.6%
Slope	572	551	21	3.7%
Stark	10966	10521	445	4.1%
REGION 8 TOTAL	22532	21709	823	3.7%
STATE TOTAL	325211	312153	13058	4.0%
Bismarck SMSA	N/A	N/A	N/A	N/A
Fargo-Moorhead SMSA	72940	70168	2772	3.8%
Grand Forks SMSA	43590	41555	2035	4.7%

Table IVd: North Dakota Labor Force
by County, by Region
Annual Average 1980

	Labor Force	Emp.	Unemployment	
			Number	Rate
1. Divide	1751	1713	38	2.2%
McKenzie	3610	3502	108	3.0%
Williams	12167	11875	292	2.4%
REGION 1 TOTAL	17528	17090	438	2.5%
2. Bottineau	4464	4261	203	4.5%
Burke	2096	2029	67	3.2%
McHenry	3661	3337	324	8.9%
Mountrail	3986	3822	164	4.1%
Pierce	3288	3161	127	3.9%
Renville	1705	1656	49	2.9%
Ward	25939	24604	1335	5.1%
REGION 2 TOTAL	45139	42870	2269	5.0%
3. Benson	3689	3406	283	7.7%
Cavalier	3874	3713	161	4.2%
Eddy	1900	1753	147	7.7%
Ramsey	7118	6817	301	4.2%
Rolette	5216	4610	606	11.6%
Towner	2216	2159	57	2.6%
REGION 3 TOTAL	24013	22458	1555	6.5%
4. Grand Forks	28398	26928	1470	5.2%
Nelson	2944	2808	136	4.6%
Pembina	5945	5552	393	6.6%
Walsh	8736	8317	419	4.8%
REGION 4 TOTAL	46023	43605	2418	5.3%
5. Cass	46760	44896	1864	4.0%
Ransom	3431	3277	154	4.5%
Richland	9299	8740	559	6.0%
Sargent	2895	2675	220	7.6%
Steele	1596	1536	60	3.8%
Traill	5015	4794	221	4.4%
REGION 5 TOTAL	68996	65918	3078	4.5%
6. Barnes	7165	6843	322	4.5%
Dickey	3822	3701	121	3.2%
Foster	2422	2320	102	4.2%
Griggs	1852	1799	53	2.9%
LaMoure	2914	2812	102	3.5%
Logan	1730	1644	86	5.0%
McIntosh	2604	2494	110	4.2%
Stutsman	12850	12192	658	5.1%
Wells	3748	3578	170	4.5%
REGION 6 TOTAL	39107	37383	1724	4.4%
7. Burleigh	31325	29677	1648	5.3%
Emmons	2728	2545	183	6.7%
Grant	1918	1824	94	4.9%
Kidder	1740	1604	136	7.8%
McLean	6646	6224	422	6.3%
Mercer	5681	5363	318	5.6%
Morton	11428	10518	910	8.0%
Oliver	1208	1119	89	7.4%
Sheridan	1442	1359	83	5.8%
Sioux	1458	1308	150	10.3%
REGION 7 TOTAL	65574	61541	4033	6.2%
Adams	2120	2077	43	2.0%
Billings	1069	1046	23	2.2%
Bowman	2278	2227	51	2.2%
Dunn	2233	2120	113	5.1%
Golden Valley	1321	1281	40	3.0%
Hettinger	2109	2040	69	3.3%
Slope	590	572	18	3.1%
Stark	11604	11116	488	4.2%
REGION 8 TOTAL	23324	22479	845	3.6%
STATE TOTAL	329700	313342	16358	5.0%
Bismarck SMSA	N/A	N/A	N/A	N/A
Fargo-Moorhead SMSA	73239	69614	3625	4.9%
Grand Forks SMSA	43531	40962	2569	5.9%

Table IVe: North Dakota Labor Force
by County, by Region
January 1980

	Labor Force	Emp.	Unemployment	
			Number	Rate
1. Divide	1436	1393	43	3.0%
McKenzie	2966	2829	137	4.6%
Williams	11006	10647	359	3.3%
REGION 1 TOTAL	15408	14869	539	3.5%
2. Bottineau	3872	3570	302	7.8%
Burke	1812	1731	81	4.5%
McHenry	3157	2744	413	13.1%
Mountrail	3516	3273	243	6.9%
Pierce	2866	2715	151	5.3%
Renville	1432	1385	47	3.3%
Ward	24903	23354	1549	6.2%
REGION 2 TOTAL	41558	38772	2786	6.7%
3. Benson	3196	2871	325	10.2%
Cavalier	3299	3097	202	6.1%
Eddy	1704	1460	244	14.3%
Ramsey	6786	6311	475	7.0%
Rolette	4761	4129	632	13.3%
Towner	1853	1776	77	4.2%
REGION 3 TOTAL	21599	19644	1955	9.1%
4. Grand Forks	27489	26013	1476	5.4%
Nelson	2540	2357	183	7.2%
Pembina	5160	4657	503	9.7%
Walsh	7745	7225	520	6.7%
REGION 4 TOTAL	42934	40252	2682	6.2%
5. Cass	45131	43278	1853	4.1%
Ransom	2976	2825	151	5.1%
Richland	8251	7803	448	5.4%
Sargent	2411	2268	143	5.9%
Steele	1349	1256	93	6.9%
Traill	4525	4291	234	5.2%
REGION 5 TOTAL	64643	61721	2922	4.5%

	Labor Force	Emp.	Unemployment	
			Number	Rate
6. Barnes	6483	6065	418	6.4%
Dickey	3370	3259	111	3.3%
Foster	2184	2029	155	7.1%
Griggs	1556	1486	70	4.5%
LaMoure	2488	2343	145	5.8%
Logan	1417	1293	124	8.8%
McIntosh	2239	2118	121	5.4%
Stutsman	12080	11207	873	7.2%
Wells	3172	2929	243	7.7%
REGION 6 TOTAL	34989	32729	2260	6.5%
7. Burleigh	29918	27992	1926	6.4%
Emmons	2271	2038	233	10.3%
Grant	1558	1420	138	8.9%
Kidder	1473	1304	169	11.5%
McLean	6220	5701	519	8.3%
Mercer	4631	4228	403	8.7%
Morton	10686	9571	1115	10.4%
Oliver	911	808	103	11.3%
Sheridan	1186	1071	115	9.7%
Sioux	1330	1174	156	11.7%
REGION 7 TOTAL	60184	55307	4877	8.1%
Adams	1895	1829	66	3.5%
Billings	647	622	25	3.9%
Bowman	1992	1931	61	3.1%
Dunn	1830	1647	183	10.0%
Golden Valley	1130	1095	35	3.1%
Hettinger	1782	1708	74	4.2%
Slope	461	438	23	5.0%
Stark	10750	10133	617	5.7%
REGION 8 TOTAL	20487	19403	1084	5.3%
STATE TOTAL	301802	282697	19105	6.3%
Bismarck SMSA				
Fargo-Moorhead SMSA	70858	67066	3792	5.4%
Grand Forks SMSA	42121	39546	2575	6.1%

Table IVf: North Dakota Labor Force
by County, by Region
October 1980

	Labor Force	Emp.	Unemployment	
			Number	Rate
1. Divide	1757	1724	33	1.9%
McKenzie	3813	3694	119	3.1%
Williams	12246	12007	239	2.0%
REGION 1 TOTAL	17816	17425	391	2.2%
2. Bottineau	4367	4229	138	3.2%
Burke	2086	2041	45	2.2%
McHenry	3573	3359	214	6.0%
Mountrail	3910	3769	141	3.6%
Pierce	3237	3132	105	3.2%
Renville	1713	1674	39	2.3%
Ward	26103	24888	1215	4.7%
REGION 2 TOTAL	44989	43092	1897	4.2%
3. Benson	3585	3317	268	7.5%
Cavalier	3796	3679	117	3.1%
Eddy	1886	1811	75	4.0%
Ramsey	7041	6827	214	3.0%
Rolette	5225	4735	490	9.4%
Towner	2246	2194	52	2.3%
REGION 3 TOTAL	23779	22563	1216	5.1%
4. Grand Forks	28934	27843	1091	3.8%
Nelson	2908	2821	87	3.0%
Pembina	5960	5693	267	4.5%
Walsh	8633	8364	269	3.1%
REGION 4 TOTAL	46435	44721	1714	3.7%
5. Cass	47230	45705	1525	3.2%
Ransom	3374	3266	108	3.2%
Richland	9284	8868	416	4.5%
Sargent	2905	2698	207	7.1%
Steele	1564	1515	49	3.1%
Traill	5033	4911	122	2.4%
REGION 5 TOTAL	69390	66963	2427	3.5%

	Labor Force	Emp.	Unemployment	
			Number	Rate
6. Barnes	7063	6839	224	3.2%
Dickey	3779	3697	82	2.2%
Foster	2365	2308	57	2.4%
Griggs	1818	1766	52	2.9%
LaMoure	2903	2822	81	2.8%
Logan	1722	1659	63	3.7%
McIntosh	2578	2513	65	2.5%
Stutsman	12731	12232	499	3.9%
Wells	3598	3500	98	2.7%
REGION 6 TOTAL	38557	37336	1221	3.2%
7. Burleigh	31501	30117	1384	4.4%
Emmons	2754	2623	131	4.8%
Grant	1914	1851	63	3.3%
Kidder	1683	1603	80	4.8%
McLean	6410	6088	322	5.0%
Mercer	6160	5925	235	3.8%
Morton	11537	10755	782	6.8%
Oliver	1353	1275	78	5.8%
Sheridan	1414	1365	49	3.5%
Sioux	1507	1362	145	9.6%
REGION 7 TOTAL	66233	62964	3269	4.9%
Adams	2104	2063	41	1.9%
Billings	1108	1085	23	2.1%
Bowman	2369	2323	46	1.9%
Dunn	2312	2255	57	2.5%
Golden Valley	1329	1288	41	3.1%
Hettinger	2098	2050	48	2.3%
Slope	590	577	13	2.2%
Stark	11796	11372	424	3.6%
REGION 8 TOTAL	23706	23013	693	2.9%
STATE TOTAL	330905	318077	12828	3.9%
Bismarck SMSA				
Fargo-Moorhead SMSA	73956	71104	2852	3.9%
Grand Forks SMSA	44265	42494	1771	4.0%

Table IVg: Food Stamp Recipients by County, First Quarter Monthly Average
1979-1981

		1979		1980		1981	
		N	%	N	%	N	%
1.	Williams	529		549		487	
	Divide	36		53		50	
	McKenzie	151		235		267	
	REGION I TOTAL	716	3.9	837	3.4	804	2.7
2.	Ward	1,605		2,238		2,661	
	Bottineau	358		395		356	
	Burke	83		79		145	
	McHenry	349		370		449	
	Mountrail	156		207		301	
	Pierce	230		250		343	
	Renville	33		61		56	
	REGION II TOTAL	2,814	15.3	3,600	14.8	4,311	14.3
3.	Ramsey	389		519		607	
	Benson	546		893		1,114	
	Cavalier	243		326		352	
	Towner	130		110		176	
	Eddy	157		177		190	
	Rolette	1,242		2,294		2,328	
	REGION III TOTAL	2,707	14.7	4,319	17.8	4,767	15.8
4.	Grand Forks	1,537		2,655		3,283	
	Nelson	86		70		101	
	Walsh	391		494		515	
	Pembina	447		489		592	
	REGION IV TOTAL	2,461	13.4	3,708	15.3	4,491	14.9
5.	Cass	1,580		2,300		2,972	
	Traill	122		188		309	
	Steele	38		54		76	
	Ransom	196		297		315	
	Richland	522		596		734	
	Sargent	175		191		280	
	REGION V TOTAL	2,633	14.3	3,626	14.9	4,686	15.5
6.	Stutsman	955		1,019		1,241	
	Wells	163		225		217	
	McIntosh	203		225		301	
	Logan	171		182		302	
	Foster	140		183		185	
	Dickey	309		323		383	
	LaMoure	183		212		241	
	Barnes	327		406		495	
	Griggs	132		144		456	
	REGION VI TOTAL	2,583	14.0	2,919	12.0	3,821	12.7
7.	Burleigh	1,234		1,619		2,167	
	McLean	339		455		570	
	Sheridan	175		160		188	
	Kidder	191		188		256	
	Emmons	364		282		412	
	Morton	896		1,000		1,403	
	Mercer	203		258		470	
	Oliver	37		47		91	
	Grant	193		280		329	
	Sioux	134		195		435	
	REGION VII TOTAL	3,766	20.5	4,484	18.5	6,321	21.0
8.	Stark	426		507		533	
	Slope/Bowman	58		58		84	
	Hettinger	127		99		147	
	Golden Valley/Billings	38		31		45	
	Dunn	46		81		114	
	Adams	16		22		52	
	REGION VIII TOTAL	711	3.9	798	3.3	972	3.0
STATE TOTAL		18,391	100.0	24,291	100.0	30,173	100.0

Table IVh: Economically Disadvantaged Resident North Dakota Job Service Clientele for Calendar 1980: County, Sex, Race/Ethnicity, and Age

					Race/Ethnicity			As a % of State
			Sex			Non-White		
		Total	Male	Female	White	Am. Ind.	Other	
1.	Williams	124	86	38	101	10	13	
	Divide	13	5	8	13	0	0	
	McKenzie	43	26	17	16	27	0	
	REGION I TOTAL	180	117	63	130	37	13	3.5
2.	Ward	398	166	232	339	36	23	
	Bottineau	24	12	12	23	0	1	
	Burke	11	7	4	9	0	2	
	McHenry	39	14	25	37	2	0	
	Mountrail	77	29	48	13	64	0	
	Pierce	12	5	7	12	0	0	
	Renville	10	7	3	10	0	0	
	REGION II TOTAL	571	240	331	443	102	26	11.1
3.	Ramsey	59	28	31	41	17	1	
	Benson	92	51	41	29	63	0	
	Cavalier	30	10	20	28	2	0	
	Towner	14	4	10	13	1	0	
	Eddy	23	14	9	23	0	0	
	Rolette	246	124	122	24	321	1	
	REGION III TOTAL	464	231	233	158	304	2	8.9
4.	Grand Forks	560	288	272	446	43	71	
	Nelson	27	14	13	27	0	0	
	Walsh	240	118	122	73	7	160	
	Pembina	105	52	53	43	2	60	
	REGION IV TOTAL	932	472	460	589	52	291	18.1
5.	Cass	1,043	536	507	886	41	116	
	Traill	201	99	102	27	1	173	
	Steele	2	1	1	2	0	0	
	Ransom	27	11	16	27	0	0	
	Richland	136	74	62	109	7	20	
	Sargent	19	12	7	19	0	0	
	REGION V TOTAL	1,428	733	695	1,070	49	309	27.7
6.	Stutsman	86	42	44	80	1	5	
	Wells	25	12	13	25	0	0	
	McIntosh	22	16	6	22	0	0	
	Logan	13	6	7	13	0	0	
	Foster	16	9	7	16	0	0	
	Dickey	32	19	13	31	1	0	
	LaMoure	18	5	13	18	0	0	
	Barnes	120	62	58	115	1	4	
	Griggs	16	12	4	15	1	0	
	REGION VI TOTAL	348	183	165	335	4	9	6.7
7.	Burleigh	457	211	246	358	79	20	
	McLean	69	29	40	49	19	1	
	Sheridan	13	6	7	12	0	1	
	Kidder	17	9	8	17	0	0	
	Emmons	37	13	24	36	1	0	
	Morton	183	97	86	151	28	4	
	Mercer	39	16	23	35	3	1	
	Oliver	12	7	5	12	0	0	
	Grant	15	3	12	15	0	0	
	Sioux	102	56	46	10	92	0	
	REGION VII TOTAL	944	447	497	695	222	27	18.3
8.	Stark	201	128	73	182	10	9	
	Slope	3	2	1	2	1	0	
	Hettinger	21	11	10	20	0	1	
	Golden Valley	11	7	4	11	0	0	
	Dunn	38	16	22	19	19	0	
	Bowman	10	6	4	10	0	0	
	Billings	1	0	1	1	0	0	
	Adams	8	7	1	7	0	1	
	REGION VIII TOTAL	293	177	116	252	30	11	5.7
STATE TOTAL		5,160	2,600	2,560	3,672	800	688	100.0
	PERCENT	100.0	50.4	49.6	71.2	15.5	13.3	

Table IVh, continued

		Age							As a % of State
		Total	<19	20-21	22-44	45-54	55-64	65+	
1.	Williams	124	42	18	50	10	4	0	
	Divide	13	8	0	4	1	0	0	
	McKenzie	43	14	10	15	2	2	0	
	REGION I TOTAL	180	64	28	69	13	6	0	3.5
2.	Ward	398	98	50	214	20	13	3	
	Bottineau	24	6	5	12	1	0	0	
	Burke	11	0	0	8	1	1	1	
	McHenry	39	16	0	16	4	3	0	
	Mountrail	77	36	9	25	5	2	0	
	Pierce	12	7	3	2	0	0	0	
	Renville	10	4	2	4	0	0	0	
	REGION II TOTAL	571	167	69	281	31	19	4	11.1
3.	Ramsey	59	32	5	18	2	2	0	
	Benson	92	41	8	35	3	4	1	
	Cavalier	30	23	2	5	0	0	0	
	Towner	14	9	1	3	1	0	0	
	Eddy	23	20	1	1	0	1	0	
	Rolette	246	111	21	89	16	8	1	
	REGION III TOTAL	464	236	38	151	22	15	2	8.9
4.	Grand Forks	560	163	86	267	25	15	4	
	Nelson	27	19	2	5	0	1	0	
	Walsh	240	99	12	92	28	8	1	
	Pembina	105	51	7	42	5	0	0	
	REGION IV TOTAL	932	332	107	406	58	24	5	18.1
5.	Cass	1,043	332	150	480	57	16	8	
	Traill	201	81	16	76	16	10	2	
	Steele	2	0	1	1	0	0	0	
	Ransom	27	10	2	13	2	0	0	
	Richland	136	45	26	58	3	1	3	
	Sargent	19	11	3	4	0	0	1	
	REGION V TOTAL	1,429	479	198	632	78	27	14	27.7
6.	Stutsman	86	36	4	38	6	1	1	
	Wells	25	12	3	8	2	0	0	
	McIntosh	22	14	0	5	1	1	1	
	Logan	13	9	1	3	0	0	0	
	Foster	16	9	1	4	1	1	0	
	Dickey	32	14	3	13	2	0	0	
	LaMoure	18	11	2	2	1	2	0	
	Barnes	120	45	22	41	2	6	4	
	Griggs	16	8	0	6	1	0	1	
	REGION VI TOTAL	348	158	36	120	16	11	7	6.7
7.	Burleigh	457	200	46	180	21	4	6	
	McLean	69	34	4	27	2	2	0	
	Sheridan	13	6	0	5	0	2	0	
	Kidder	17	12	0	4	1	0	0	
	Emmons	37	27	5	3	0	1	1	
	Morton	183	120	11	43	9	0	0	
	Mercer	39	21	3	15	0	0	0	
	Oliver	12	9	0	1	2	0	0	
	Grant	15	9	0	3	2	1	0	
	Sioux	102	36	9	51	4	2	0	
	REGION VII TOTAL	944	474	78	332	41	12	7	18.3
8.	Stark	201	81	31	74	9	5	1	
	Slope	3	0	0	3	0	0	0	
	Hettinger	21	11	4	6	0	0	0	
	Golden Valley	11	9	1	1	0	0	0	
	Dunn	38	16	6	14	2	0	0	
	Bowman	10	4	2	3	0	0	1	
	Billings	1	1	0	0	0	0	0	
	Adams	8	4	3	1	0	0	0	
	REGION VIII TOTAL	293	126	47	102	11	5	2	5.7
STATE TOTAL		5,160	2,036	601	2,093	270	119	41	100.0
PERCENT		100.0	39.5	11.7	40.6	5.2	2.3	.7	

Table IVi: Characteristics of Economically Disadvantaged Job Applicants
FY 1977-1980
Total Applicants Available

	FY 1980		FY 1979		FY 1978		FY 1977	
	N	%	N	%	N	%	N	%
All Applicants Available	86,616		81,594		82,397		**	
Total Economically Disadvantaged	14,812	100.0	14,227	100.0	15,115	100.0	14,080	100.0
Economically Disad. as a Percent of All Applicants Available	17.1		17.4		18.3		**	
CHARACTERISTICS OF THE ECON. DISAD.								
AGE								
<21	6,142	41.5	6,070	42.7	6,584	43.5	6,118	43.5
22-39	6,476	43.7	6,037	42.4	6,200	41.0	5,651	40.1
40-44	723	4.9	681	4.8	675	4.5	685	4.9
45-54	910	6.1	894	6.3	1,012	6.7	991	7.0
55-64	426	2.9	394	2.8	468	3.1	478	3.4
65>	135	0.9	151	1.0	176	1.2	157	1.1
SEX								
Male	7,094	47.9	6,592	46.3	7,123	47.1	6,894	49.0
Female	7,718	52.1	7,635	53.7	7,992	52.9	7,168	51.0
HIGHEST SCHOOL GRADE								
0-7	965	6.5	821	5.8	803	5.3	804	5.7
8-11	5,963	40.3	5,971	42.0	6,484	42.9	6,119	43.4
12	5,126	34.6	4,894	34.4	5,066	33.5	4,724	33.6
12>	2,758	18.6	2,541	17.8	2,762	18.3	2,433	17.3
RESIDENCE								
Urban	7,912	53.4	7,350	51.7	7,655	50.6	6,938	49.3
Rural	6,900	46.6	6,877	48.3	7,460	49.4	7,142	50.7
RACE/ETHNICITY								
White	10,901	73.6	10,516	73.9	11,501	76.1	11,202	79.5
American Indian	2,698	18.2	2,745	19.3	2,833	18.7	2,249	16.0
Spanish American [1]	936	6.3	752	5.3	667	4.4	459	3.2
Other/INA	277	1.9	214	1.5	114	0.8	170	1.2
VETERAN	2,007	13.6	2,012	14.1	2,175	14.4	2,295	16.3
Vietnam Era	826	5.6	850	6.0	725	4.8	1,557	11.1
HANDICAPPED	2,393	16.2	2,251	15.8	2,394	15.8	2,235	15.9
WELFARE RECIPIENTS	3,578	24.2	3,739	26.3	4,143	27.4	4,346	30.9
EMPLOYMENT								
Full-time	982	6.6	1,076	7.6	1,249	8.3	1,209	8.6
Part-time	650	4.4	609	4.3	702	4.6	535	3.8
Not Working	13,180	89.0	12,542	88.1	13,164	87.1	12,336	87.6
Not Working Job Attached	205	1.4	223	1.6	227	1.5	397	2.8

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[1] FY 1979 changes in the way data is recorded prohibits comparison of 1979 and 1980 data in these categories with data collected during preceding years. (ESARS TAble 6.)

**Not comparable with succeeding years.

Table Va: Population and Labor Force by SMSA

Population (46,47)

Fargo-Moorhead SMSA	Rural Portion		City Portion		County Total	
	1980	1970	1980	1970	1980	1970
Cass County, ND	26,939	20,288				
Fargo			61,308	53,365	88,247	73,653
Clay County, MN	19,329	16,921				
Moorhead			29,998	29,687	49,327	46,608
Total	46,268	37,209	91,306	83,052	137,574	120,261
Row % 1980	33.6		66.4		100.0	
Row % 1970		30.9		69.1		100.0

Grand Forks SMSA	Rural Portion		City Portion		County Total	
	1980	1970	1980	1970	1980	1970
Grand Forks County, ND	22,335	22,094				
Grand Forks			29,998	29,687	66,100	61,102
Polk County, MN	26,307	26,828				
East Grand Forks			8,537	7,607	34,844	34,435
Total	48,642	48,922	38,535	37,294	100,944	95,537
Row % 1980	48.2		51.8		100.0	
Row % 1970		51.2		48.8		100.0

Bismarck SMSA	Rural Portion		City Portion		County Total	
	1980	1970	1980	1970	1980	1970
Burleigh, ND	10,326	6,011				
Bismarck			44,485	34,703	54,811	40,714
Morton, ND	9,664	9,217				
Mandan			15,513	11,093	25,177	20,310
Total	19,990	15,228	59,998	45,796	79,988	61,024
Row % 1980	25.0		75.0		100.0	
Row % 1970		25.0		75.0		100.0

Civilian Labor Force

1980 Annual Average	Employment	Unemployment		Labor Force
	N	N	%	N
Fargo-Moorhead SMSA	69,614	3,625	4.9	73,239
Grand Forks SMSA	40,962	2,569	5.9	43,531
Bismarck SMSA	40,195	2,558	6.0	42,753

Table Vb: Bismarck-Mandan SMSA Farm and Operator Characteristics by Sales Class
(Burleigh and Morton Counties)

	Farms ≥ $1,000 in Sales					Farms ≥ $2,500 in Sales				
	1974		1978		% Ch.	1974		1978		% Ch.
	N	%	N	%		N	%	N	%	
Total Farms/Operators	1,940	100.0	1,860	100.0	-4.1	1,765	100.0	1,678	100.0	-4.9
Farm Size (acres)										
<10	75	3.9	89	4.8	18.7	40	2.3	53	3.2	32.5
10-49	50	2.6	66	3.5	32.0	13	0.7	20	1.2	53.8
50-179	138	7.1	196	10.5	42.0	83	4.7	129	7.7	55.4
180-499	316	16.3	299	16.1	-5.4	279	15.8	273	16.3	-2.2
500-999	517	26.6	410	22.0	-20.7	512	29.0	407	24.2	-20.5
1,000-1,999	575	29.6	535	28.8	-7.0	571	32.4	534	31.8	-6.5
≥2,000	269	13.9	265	14.2	-1.5	267	15.2	262	15.6	-1.9
Farm Size (summary)										
≤179	263	13.6	351	18.9	33.5	136	7.7	202	12.1	48.5
180-999	833	42.9	709	38.1	-14.9	791	44.8	680	40.5	-14.0
≥1,000	844	43.5	800	43.0	-5.2	838	47.5	796	47.4	-5.0
Operator Characteristics										
Full Owner	952	49.1	833	44.8	-12.5	815	46.2	709	42.3	-13.0
Part Owner	804	41.4	791	42.5	-1.6	788	44.6	759	45.2	-3.7
Tenant	184	9.5	236	12.7	28.3	162	9.2	210	12.5	29.6
Operator Off-Farm Work Days										
None	1,338	69.0	1,110	59.7	-17.0	1,272	72.1	1,077	64.2	-15.3
Subtotal	602	31.0	750	40.3	24.6	493	27.9	601	35.8	21.9
≤99 Days	218	11.2	259	13.9	18.8	201	11.4	247	14.7	22.9
≥100 Days	384	19.8	491	26.4	27.9	292	16.5	354	21.1	21.2

SOURCE: 1978 Census of Agriculture, Preliminary Report AC78-P-38, October 1980. Bureau of the Census.

Table Vc: Fargo-Moorhead SMSA Farm and Operator Characteristics by Sales Class
(Cass and Clay Counties)

	Farms ≥ $1,000 in Sales					Farms ≥ $2,500 in Sales				
	1974		1978		% Ch.	1974		1978		% Ch.
	N	%	N	%		N	%	N	%	
Total Farms/Operators	2,720	100.0	2,589	100.0	-4.8	2,539	100.0	2,454	100.0	-3.3
Farm Size (acres)										
<10	80	2.9	70	2.7	-12.5	52	2.1	43	1.7	-17.3
10-49	121	4.5	119	4.6	-1.7	53	2.0	58	2.4	11.5
50-179	455	16.7	359	13.9	-21.1	390	15.4	317	12.9	-18.7
180-499	850	31.3	781	30.1	-8.1	835	32.9	778	31.7	-6.8
500-999	708	26.0	719	27.8	1.6	704	27.7	718	29.6	2.0
1,000-1,999	419	15.4	424	16.4	1.2	419	16.5	424	17.3	1.2
≥2,000	87	3.2	117	4.5	34.5	86	3.4	116	4.7	34.9
Farm Size (summary)										
≤179	656	24.1	548	21.2	-16.5	537	19.5	418	17.0	-22.2
180-999	1,558	57.3	1,500	57.9	-3.7	1,539	60.6	1,496	61.3	-2.8
≥1,000	506	18.6	541	20.9	6.9	505	19.9	540	22.0	6.9
Operator Characteristics										
Full Owner	1,190	43.8	899	34.7	-24.5	1,043	41.1	787	32.1	-24.5
Part Owner	1,111	40.8	1,191	46.0	7.2	1,098	43.2	1,178	48.0	7.3
Tenant	420	15.4	499	19.3	18.8	398	15.7	489	19.9	22.9
Operator Off-Farm Work Days										
None	1,997	73.4	1,632	63.0	-18.3	1,890	74.4	1,599	65.2	-15.4
Subtotal	723	26.6	957	36.9	32.4	649	25.5	855	34.8	31.7
≤99 Days	256	9.4	423	16.3	65.2	288	11.3	410	16.7	42.4
≥100 Days	467	17.2	534	20.6	14.3	361	14.2	445	18.1	23.3

SOURCE: 1978 Census of Agriculture, Preliminary Reports AC78-P-38 and P-27, October 1980. Bureau of the Census.

Table Vd: Grand Forks SMSA Farm and Operator Characteristics by Sales Class (Grand Forks and Polk Counties)

	Farms ≥ $1,000 in Sales					Farms ≥ $2,500 in Sales				
	1974		1978		% Ch.	1974		1978		% Ch.
	N	%	N	%		N	%	N	%	
Total Farms/Operators	3,185	100.0	3,056	100.0	-4.1	2,926	100.0	2,854	100.0	-2.8
Farm Size (acres)										
<10	60	1.9	80	2.6	33.3	31	1.1	62	2.2	100.0
10-49	101	3.2	142	4.7	40.6	53	1.8	77	2.7	45.3
50-179	580	18.2	574	18.8	-1.0	431	14.7	470	16.5	9.0
180-499	1,072	33.6	854	27.9	-20.3	1,042	35.6	842	29.5	-19.2
500-999	797	25.0	776	25.4	-2.6	795	27.2	774	27.1	-2.6
1,000-1,999	448	14.1	481	15.7	7.4	447	15.3	480	16.8	7.4
≥2,000	127	4.0	149	4.9	17.3	127	4.3	149	5.2	17.3
Farm Size (summary)										
≤179	741	23.3	796	26.1	7.4	515	17.6	609	21.4	18.3
180-999	1,869	58.6	1,630	53.3	-12.8	1,837	62.8	1,616	56.6	12.0
≥1,000	575	18.1	630	20.6	9.6	574	19.6	629	22.0	9.6
Operator Characteristics										
Full Owner	1,315	41.3	1,124	36.8	-14.5	1,109	37.9	958	33.6	-13.6
Part Owner	1,450	45.5	1,341	43.9	-7.5	1,425	48.7	1,323	46.3	-7.2
Tenant	420	13.2	591	19.3	40.7	392	13.4	573	20.1	46.2
Operator Off-Farm Work Days										
None	2,197	69.0	1,786	58.4	-18.7	2,104	71.9	1,729	60.6	-17.8
Subtotal	988	31.0	1,270	41.6	28.5	822	28.1	1,125	39.4	36.9
<99 Days	370	11.6	528	17.3	42.7	335	11.5	505	17.7	50.7
≥100 Days	618	19.4	742	24.3	20.1	487	16.6	620	21.7	27.3

SOURCE: 1978 Census of Agriculture, Preliminary Reports AC78-P-38 and P-27, October 1980. Bureau of the Census.